TM 11-6125-252-15

TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT, GENERAL SUPPORT AND DEPOT MAINTENANCE MANUAL

MOTOR-GENERATOR PU-724/G (NSN 6125-00-617-1435)

This copy is a reprint which includes current pages from Change 1. Title was changed by Change 1 as shown above.

HEADQUARTERS, DEPARTMENT OF THE ARMY
JULY 1971

WARNING

DANGEROUS VOLTAGES EXIST IN THIS EQUIPMENT

Do not remove covers or expose live parts until dc input is disconnected.

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HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *7 July 1971*

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CHAPTER 1
INTRODUCTION

Section 1. GENERAL

1-1. Scope

This manual describes Motor Generator PU-724/G (fig. 1-1), and contains procedures for installing and operating it. The manual also contains operator, organizational, direct support, general support, and depot maintenance procedures. These include inspection, testing, and parts replacement authorized for operator maintenance level and higher.

1-2. Forms and Records

a. Reports of Maintenance and Unsatisfactory Equipment. Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by TM 38-750.

b. Report of Packaging and Handling Deficiencies. Fill out and forward DD Form 6 (Packaging Improvement Report) as prescribed in AR 700-58/NAVSUPINST 4030.29/AFR 71-13/MCO P4030.29A, and DSAR 4145.8.

c. Discrepancy in Shipment Report (DISREP) (SF 361). Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33B/AFR 75-18/MCO P4610.19C and DLAR 4500.15.

1-2.1. Reporting of Errors

The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forwarded direct to Commander, US Army Communications and Electronics Materiel Readiness Command, ATTN: DRSEL-ME-MQ, Fort Monmouth, NJ 07703.

1-3. Administrative Storage

Perform operator's maintenance instructions in chapter 3 before placing the PU-724/G into administrative storage and after removing it from administrative storage.

1-3.1. Reporting Equipment Improvement Recommendations (EIR)

EIR's will be prepared using SF 368, Quality Deficiency Report. Instructions for preparing EIR's are provided in TM 38-750, the Army Maintenance Management System. EIR's should be mailed direct to Commander, US Army Communications and Electronics Materiel Readiness Command, ATTN: DRSEL-ME-MQ, Fort Monmouth, NJ 07703. A reply will be furnished direct to you.

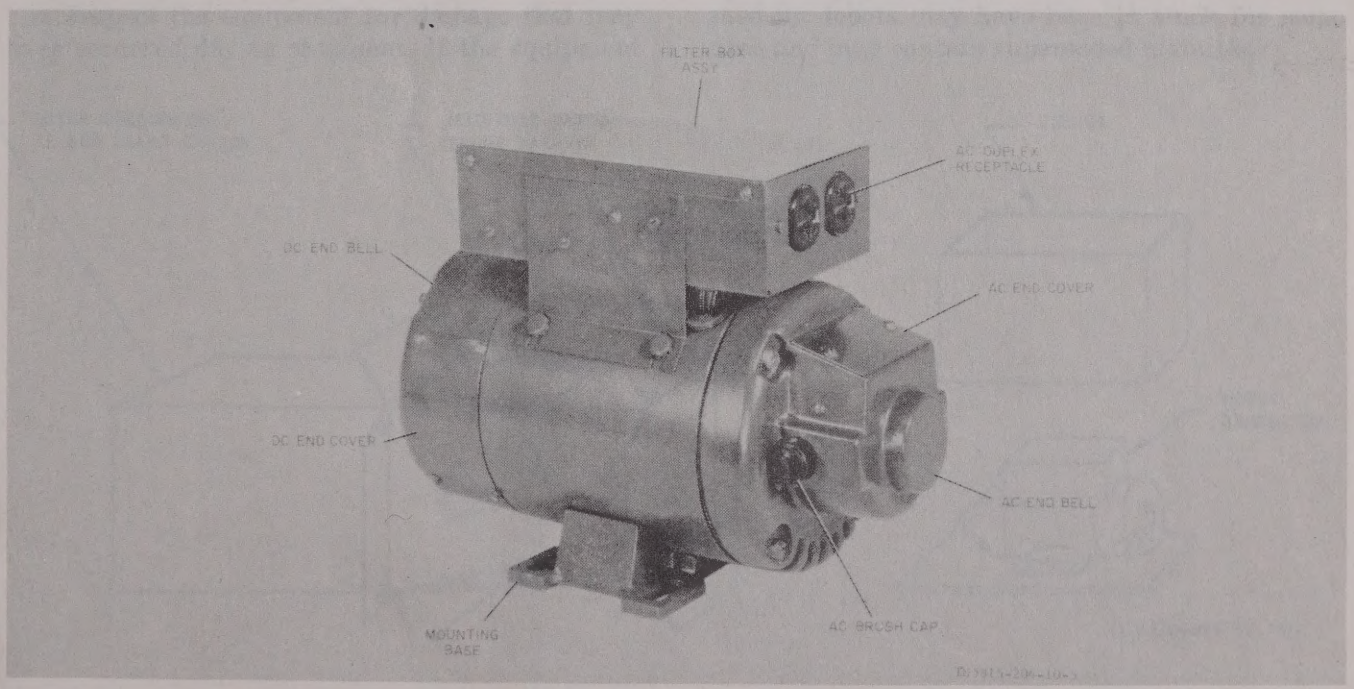


Figure 1-1. Motor generator PU-724/G.

CHAPTER 2

INSTALLATION AND OPERATION

Section I. INSTALLATION

2-1. General

The motor generator is designed for easy installation. It requires only placement and connection of the input and output cables in order to be ready for service.

2-2. Unpacking

a. The motor generator is mounted on a 3/8-inch piece of plywood 7 1/2 inches by 15 inches and shipped in a sealed, corrugated paper container 11 inches high, 17 inches wide, and 8 inches deep, having a volume of 0.86 cubic feet and a gross weight of 48 pounds (fig. 2-1).

b. Unpack carefully and remove the unit from the mounting board. Retain the two copies of the instruction book packed in the carton.

2-3. Checking Unpacked Equipment

a. Inspect the equipment for damage that may have occurred during shipment. If the equipment has been damaged, fill out and forward DD Form 6 (para 1-2*b*).

b. The motor generator comes packed as a single unit without additional components or accessories and is complete within itself.

c. Check to see whether the equipment has been modified. If the equipment has been modified, the MWO number will appear near the nomenclature plate. Check also to see whether all MWOs current at the time the equipment is placed in use have been applied.

NOTE

Current MWOs applicable to the equipment are listed in DA PAM 310-7.

d. Check the latest issue of DA Pam 310-4 (never more than 1 year old) and its latest changes (never more than 6 months old) to see whether you have the latest editions of all applicable maintenance literature. (Equipment issued by depots may have been in stock for some time and may contain superseded manuals.)

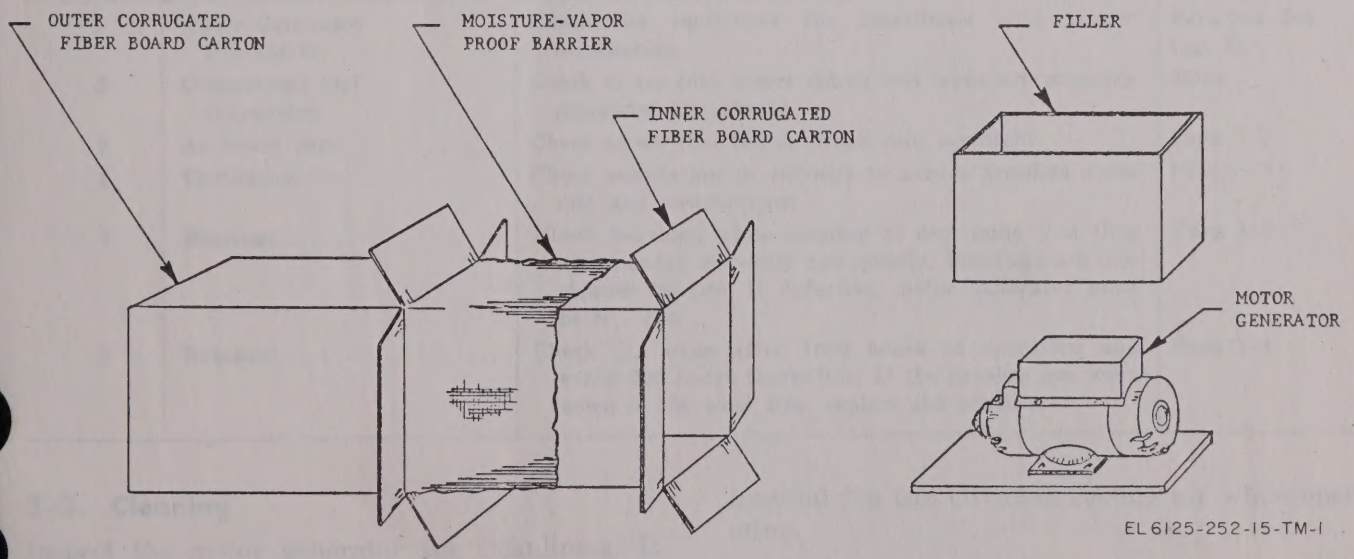


Figure 2-1. Packaging motor generator.

2–4. Installation

a. Mounting. The motor generator can be mounted by means of four hexagon head 5/16 bolts with a flat washer under the heads. Use the four slots in the stamped steel base. The unit should be mounted on a level surface with the axis of the armature horizontal.

b. Moisture. All electrical equipment should be protected against excessive moisture. Failure to do so can result in deterioration of the insulation and could result in short circuits and grounds.

c. Dirt. Foreign materials such as dust, sand, lint, and abrasives can cause excessive bearing and brush wear. It is therefore important that the unit be installed in a reasonably clean location for best results.

d. Connection. Remove the filter box cover (fig. 5–1). Insert the dc input cable through the cable clamp in the cover and connect the leads to the proper polarity terminals on the input terminal strip. Replace the cover and tighten the cable clamp. Plug the load cable into the ac receptacle in the filter box cover.

Section II. OPERATION

2–5. Scope

This section covers the operation of the motor generator and the operators maintenance instructions.

2–6. Operation

a. Starting. Turn on the dc power supply to the motor generator. Ac power is available at the duplex receptacle.

b. Running. Air circulation through the ventilating openings must not be blocked. Avoid the circulation of dirt and foreign materials in the ventilating air.

c. Stopping. Turn off the dc power supply.

d. Adjustments. No adjustments need be made on the motor generator.

CHAPTER 3

OPERATOR'S MAINTENANCE INSTRUCTIONS

3-1. Scope of Maintenance

The following is a list of maintenance duties normally performed by the operator of the motor generator. These procedures do not require special tools or test equipment.

a. Preventive maintenance (para 3-2).

b. Cleaning (para 3-3).

c. Checking brushes (para 3-4).

d. Operational checks (para 3-5).

3-2. Preventive Maintenance

Preventive maintenance is the systematic care, servicing, and inspection of equipment to prevent the occurrence of trouble, to reduce repair time, and to assure that the equipment is serviceable.

a. Systematic Care. The procedures given in *b* and *c* below and in paragraphs 3-3, 3-4, and 3-5 cover systematic care essential to proper upkeep and operation of the equipment. The cleaning operation (para 3-3) should be performed daily during periods of use and before operation after any extended shutdown period. The other items should be checked as indicated.

b. Preventive Maintenance Checks and Services. The daily preventive maintenance checks and services chart (*c* below) outlines inspections to be made daily during periods of use and after periods of nonuse. These inspections and operational checks (para 3-5) are made to determine serviceability. The chart indicates what to inspect, how to inspect, and what the normal conditions are. The *Reference* column lists the paragraphs that contain additional information. If the defect cannot be remedied by the operator, higher category of maintenance or repair is required. Records and reports of these inspections must be made in accordance with TM 38-750.

c. Daily Preventive Checks and Services Chart. The items listed below should be checked on a daily basis during periods of use. If the equipment is not in daily use, the checks and services should be performed before each use.

Seq. No.	Item	Procedure	Reference
1	Motor Generator PU-724/G.	Check the equipment for cleanliness, and proper installation.	Para 2-4, 3-3, app. C.
2	Connections and connectors.	Check to see that power cables and cords are properly connected and secure.	None
3	Ac brush caps	Check to see that the ac brush caps are tight.	Para 3-4
4	Ventilation	Check ventilation in endbells to assure freedom from dirt and obstructions.	Para 3-3
5	Bearings	Check bearings while running to determine that they are running smoothly and quietly. Bearings are lubricated for life. If defective, motor generator must be replaced.	Para 4-3
6	Brushes	Check for wear after 1000 hours of operation and every 200 hours thereafter. If the brushes are worn down to the wear line, replace the brushes.	Para 3-4

3-3. Cleaning

Inspect the motor generator for cleanliness. It should be free of dirt, dust, grease, and fungus. Ventilating openings should be clean so that the internal fan can circulate cooling air while operating.

a. Remove dust and loose dirt with a clean, soft cloth.

b. Remove dust and dirt from plugs, receptacles, and ventilating openings with a brush.

3–4. Checking Brushes

a. Check the ac brushes after 1000 hours of operation and every 200 hours thereafter. Remove the cap of each ac brush (fig. 4–1) and lift out the brush. If the working face is worn down to the end of the wear line, it should be replaced (para 4–8). Replace the brush exactly as it was removed until a new brush is installed. Do not interchange brushes.

b. Check the dc brushes after 1000 hours of operation and every 200 hours thereafter. Remove the cover plates over the dc brushes (figs. 4–2 and 5–1). Lift the finger over the brush and lift out the brush. If the working face is worn down to the end of the wear line, it should be replaced (para 4–8). Replace the brush exactly as it was removed until a new brush is installed.

3–5. Operational Checks

a. The motor generator should run freely when the dc power is turned on. The receptacle should have 110 volts, 60 Hz available. If unit does not run, first check dc power supply and then the dc brushes (para 3–4). If unit runs but does not produce ac, check ac brushes (para 3–4).

b. There are no adjustments for the motor generator. If it does not operate after performing *a* above, remove and replace (para 4–9).

CHAPTER 4

ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

4-1. Scope of Organizational Maintenance

a. Paragraphs 4-2 through 4-10 cover organizational maintenance of the motor generator. Refer to paragraphs 2-1 through 2-4 for installation of this equipment; and to paragraphs 2-5 and 2-6 for its operation.

b. Organizational maintenance for the motor generator PU-724/G consists of the following:

(1) Preventive maintenance (para 4-3).

(2) Monthly maintenance (para 4-4).

(3) Monthly preventive maintenance checks and services chart (para 4-5).

(4) Quarterly checks and services (para 4-6).

(5) Quarterly maintenance checks and services chart (para 4-7).

(6) Removal and replacement of brushes (para 4-8).

(7) Removal and replacement of motor generator (para 4-9).

(8) Troubleshooting (para 4-10).

4-2. Tools, Materials, and Test Equipment Required

a. The only tools required to perform maintenance at this level are included in TE-50B, FSN 5180-356-4602.

b. Materials.

(1) Trichloroethane cleaning compound.

WARNING

The fumes of trichloroethane are toxic. Provide thorough ventilation whenever used. DO NOT use near an open flame. Trichloroethane is not flammable, but exposure of the fumes to an open flame converts the fumes to highly toxic, dangerous gases.

(2) Cleaning cloths.

4-3. Preventive Maintenance

a. Preventive maintenance is the systematic care, inspection and servicing of equipment to maintain it in serviceable condition, prevent breakdowns, and assure maximum operational capability. Preventive maintenance is the respon-

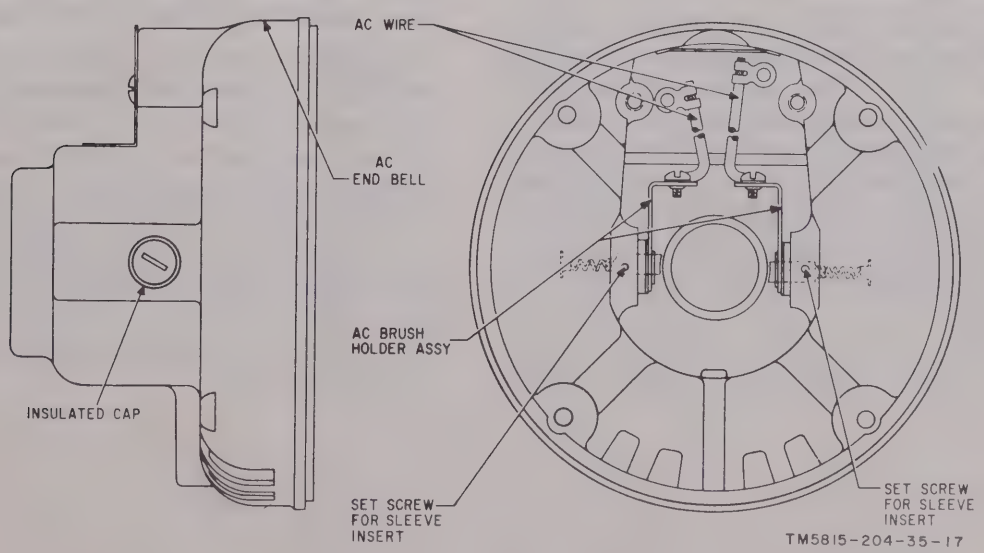


Figure 4-1. Motor generator, ac endbell.

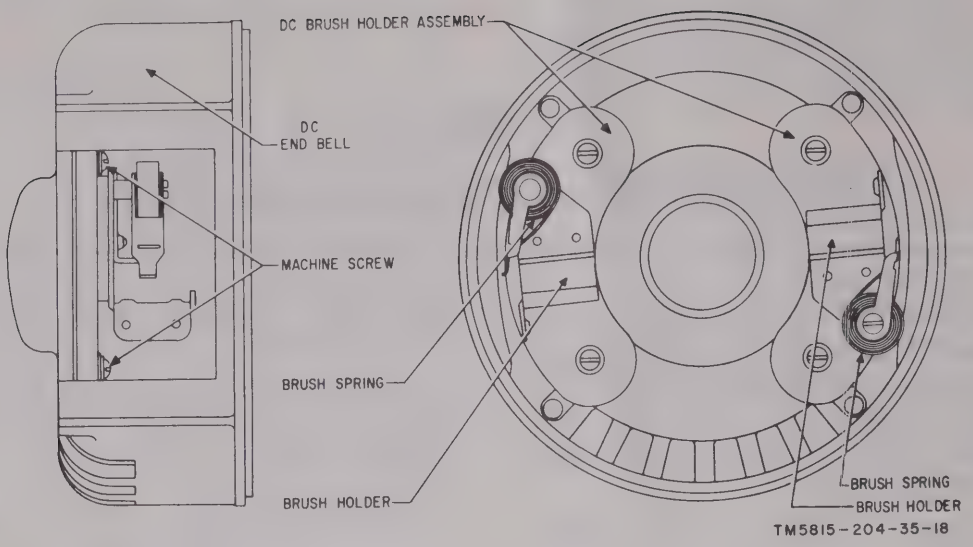


Figure 4–2. Motor generator, dc endbell.

sibility of all levels concerned with the equipment and includes the inspection, testing, and repair or replacement of parts, subassemblies, or units that inspection and tests indicate would probably fail before the next scheduled periodic service. Preventive maintenance service and inspections of the motor generator are made at monthly and quarterly intervals unless otherwise directed by the commanding officer.

b. Maintenance forms and records to be used and maintained on this equipment are specified in TM 38–750.

4–4. Monthly Maintenance

a. Perform the maintenance functions indicated in the daily preventive maintenance checks and services chart (para 3–2*c*) once each month. A month is defined as approximately 30 calendar days of 8-hour-per-day operation. If the equipment is operated 16 hours per day, the monthly preventive maintenance checks and services should be performed at 15 day intervals. Adjustment of the maintenance interval must be made to compensate for any unusual operating conditions. In addition, see that the nameplate is secure and all screws, nuts, and bolts are tight. Check for worn or damaged cables. Equipment in limited storage (requires service before operation) does not require require monthly maintenance.

b. See that motor generator is clean as described in paragraph 3–3. Use cleaning compound with a cloth to clean surfaces if necessary. Do not allow cleaning compound to run into the motor generator.

4–5. Monthly Preventive Maintenance

Refer to paragraph 3–2*c* for the checks and services chart.

4–6. Quarterly Checks and Services

Quarterly preventive maintenance checks and services on the motor generator are required. The periodic daily and monthly services constitute a part of the quarterly preventive maintenance checks and services, and must be performed concurrently (paras 3–2, 4–3, 4–4, and 4–5). All deficiencies and defects will be recorded in accordance with the requirements of TM 38–750. Perform all of the checks and services listed in the quarterly maintenance checks and services chart (para 4–7).

4-7. Quarterly Maintenance Checks and Services Chart

Seq. No.	Item	Procedure	Ref.
1	Completeness	Check to see that the motor generator is complete with filter box, dc input cable, output receptacle, and nameplate.	None.
2	Installation	Check to see that equipment is installed properly.	Para 2-4.
3	Cleanliness	See that equipment is clean and free of dust, dirt, grease, and corrosion.	Para 4-4*b*.
4	Obvious defects	Inspect the equipment for obvious defects.	None.
5	Modifications	Check DA Pam 310-7 to determine whether new applicable MWOs have been published. All URGENT MWOs must be applied immediately. All NORMAL MWOs must be scheduled.	TM 38-750 and DA Pam 310-7.
6	Security of mounting	Check for security of mounting of equipment.	None.

4-8. Removal and Replacement of Brushes

Replacement of brushes is required when inspection (para 3-4) shows that they are worn down to the wear line. A full set of spare brushes is shipped with the motor generator.

a. Ac Brushes. See paragraph 3-4*a* for brush checking procedure. When replacing with new brushes, the curvature must be observed to insure proper seating and contact with the sliprings.

b. Dc Brushes. See paragraph 3-4*b* for brush checking procedure. Remove the machine screws that secure the brush leads to the brush holders. Place the new brush in the holder, observing the curvature and polarity marking. Place the terminal under the machine screw in the holder and tighten. See that spring and finger move freely and press down on top of brush in holder.

c. Brushes will reseat to the curvature of the sliprings and commutator after several hours of operation.

4-9. Removal and Replacement of Motor Generator

a. Removal.

(1) Remove the dc power cable plug from its termination point.

(2) Remove any plugs that may have been plugged into the output receptacle on the motor generator.

(3) Remove the four capscrews, lockwashers, and plain washers that secure the motor generator to the shelter frames, and remove the motor generator.

b. Replacement. Refer to paragraphs 2-1 through 2-4 for installation.

4-10. Troubleshooting

a. General. Troubleshooting the motor generator consists of isolation of the trouble. If the defect is within the scope of operator or organizational maintenance, the repair will be accomplished by that category of maintenance. Defects beyond the scope of organizational maintenance will be referred to higher category of maintenance. However, troubleshooting performed at the organizational maintenance category can determine which part of the generator is defective.

b. Procedure. Perform the operational checks given in paragraph 3-5 if motor generator does not provide ac power when the dc power is applied. Follow the monthly (para 4-5) and quarterly (para 4-7) maintenance checks and services charts to determine if there is any other cause for failure to operate. If no cause for failure to operate can be found and corrected, remove faulty unit and replace (para 4-9) with a motor generator which is in good operating condition.

CHAPTER 5

DIRECT SUPPORT MAINTENANCE INSTRUCTIONS

5–1. General

a. The direct support maintenance procedures in this paragraph and paragraphs 5–2 through 5–7 supplement the procedures described in chapters 3 and 4. The systematic troubleshooting procedures, which began at the operator's and organizational maintenance level, are carried to a higher level in this chapter.

b. A thorough visual check of the equipment should be made when trouble occurs. Check for broken or disconnected cables. Check for damaged or broken enclosures on the motor generator or filter box.

5–2. Troubleshooting Procedures

The first procedures of troubleshooting are done at the operator's and organizational maintenance categories (paras 3–5 and 4–10). The troubleshooting procedures given in this chapter further isolate the trouble and give repair information as applicable at this category of maintenance.

5–3. Test Equipment, Tools, and Other Equipment Required

All test equipment, tools, and other equipment required to perform the testing procedures given in this section are listed in the following charts:

a. Test Equipment.

Nomenclature	Federal stock no.	Technical reference
Multimeter TS–352B/U	6625–553–0142	TM 11–6625–366–15
Electrical Power Test Set TS–914/U	6625–542–1289	TM 11–6625–303–12

b. Tools.

Nomenclature	Federal stock no.	Technical reference
Toolkit, Electronic Equipment TK–105/G	5180–610–8177	SC 5180–91–CL–R07
Bearing Puller, Owatonna Tool Company No. 950 or equal.		

c. Other Equipment.

Nomenclature	Federal stock no.	Technical reference
Cable, power, electrical[a] (or any 2 conductor #10 AWG cable).	6145–161–0798	fig. 6–1
Cord, power CX–237(*)/U.[b]		fig. 6–1

[a] Five feet long.
[b] Indicates CX–237/U and CX–237A/U.

5–4. Troubleshooting Motor Generator

Whenever difficulty is experienced with a motor generator, a visual inspection (*a* below) may locate the fault. If visual inspection does not locate the fault, proceed with the electrical tests (*b below*). The troubleshooting chart (para 5–5) provides additional assistance in locating trouble.

a. Make a visual inspection of the unit. This will frequently disclose a loose or broken wire or other obvious cause for faulty operation or failure.

b. Make the following electrical tests in order to locate electrical faults. Before making any tests on the motor generator (except operational

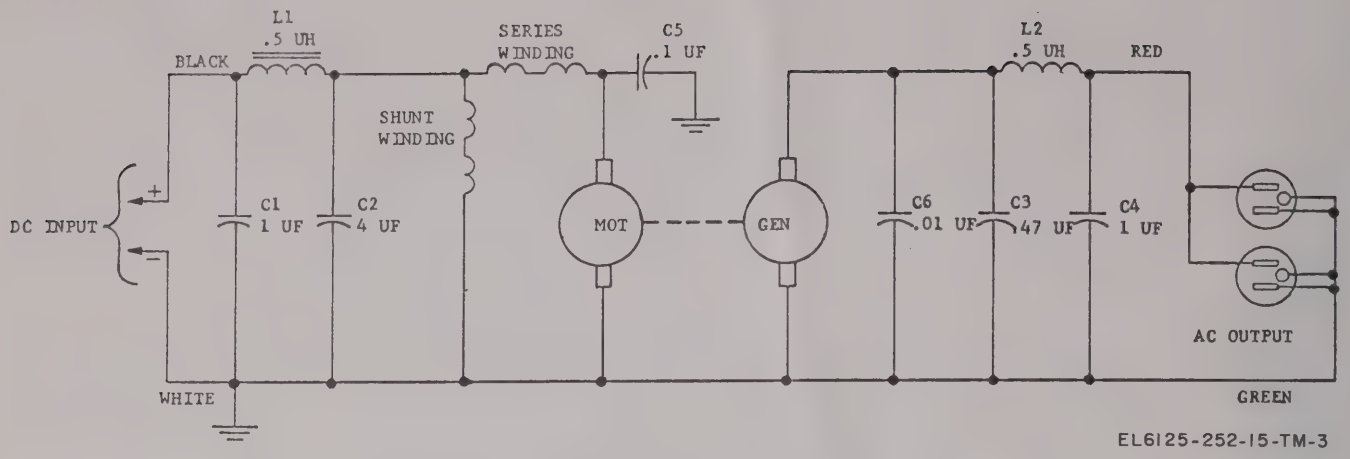


Figure 5–2. Motor generator, schematic diagram.

tests), disconnect the dc power supply. Multimeter TS–352B/U may be used for making continuity tests and checking dc voltage and current.

(1) *Armature Test.*

(*a*) *Test for ground.* First lift the brushes from both the commutator and sliprings and block them in the raised position. With Multimeter TS–352B/U, test between the armature shaft and each slipring. Test between the armature shaft and each segment of the commutator. A closed circuit reading indicates that the part under test is shorted to ground. Check for worn or dirty insulation or foreign metallic materials.

(*b*) *Test for open circuit.* Place one of the test prods of the multimeter on one of the segments of the commutator. Place the other test prod on the adjoining segment. Keep the first prod in contact with the one segment and move the second prod from segment to segment, completely around the commutator, until a check of all commutator segments has been made. No reading indicates an open circuit. If an open circuit is indicated, inspect the soldered connection on the end of the segment. To test the ac circuit, place one test prod on each of the sliprings. No reading indicates that the circuit is open.

(2) *Capacitor tests.* Before testing a capacitor, disconnect one end. Make a continuity test between the two terminals of the capacitor. If continuity is indicated, the capacitor is short circuited and must be replaced. The best test for a capacitor is to substitute a good capacitor for the one suspected of being faulty. To be safe, replace any capacitor suspected of causing trouble.

(3) *Field test.*

(*a*) Lift the brushes from the armature commutator and block them in the raised position. With Multimeter TS–352B/U, test the shunt field coil circuit for continuity. If circuit is complete, check resistance of the total field circuit. The resistance should be from 17 to 19 ohms at 20° C. If circuit is open or resistance is incorrect, field shell assembly must be replaced unless broken wire is located.

(*b*) Check series field for continuity between A+ terminal, located on the dc input terminal strip in the filter box, and positive brush holder.

5–5. Troubleshooting Charts for Motor Generator

The troubleshooting charts that follow list various troubles and trouble symptoms that may be readily detected. When the type of trouble has been determined, check the various points listed under possible causes and then correct the difficulty in accordance with instructions listed under remedy. Where disassembly is required, refer to paragraph 5–6 for procedures.

a. Unit Fails to Start.

Possible cause	*What to check*	*Remedy*
No dc input; open in dc circuit	Inspect dc wiring inside of filter box. Test dc components in filter box. See figures 5–1 and 5–2.	Correct faulty wiring inside filter box. Replace faulty dc filter components. See figures 5–1 and 5–2.
Dc brush not making contact	Check for weak or broken brush spring. Measure brush length for worn brushes. Check brushes for free movement in holders.	Replace faulty brush spring. Replace any brush worn below ½ inch. Refer to paragraph 4–8*b*.
Armature jammed	Remove inspection cover and try to turn it by hand. Check the bearings. Check for foreign material or broken brush causing jamming.	Refer to paragraph 5–6. Replace broken brush causing jamming. Remove foreign material around armature. Check bearing alignment. Refer to depot category for replacement of bearings.

b. Unit Runs but Does not Deliver Current.

Possible cause	*What to check*	*Remedy*
Open ac circuit	Inspect ac wiring and connections. Test filter coils.	Repair or replace faulty part.
Ac brushes not making good contact.	Inspect for weak or broken brush spring (fig. 4–1). See that brushes move freely in holders. Check brush length against wear line.	Replace broken spring. Clean brushes and brush holders. Replace worn brushes.
Partial short in ac circuit	Test wiring. Test filter capacitors under load.	Repair or replace faulty wiring. Replace capacitors.

c. Low Ac Output Voltage.

Possible cause	*What to check*	*Remedy*
Low dc input voltage	Test dc input voltage	Correct cause of low dc input voltage.
Partial short in ac circuit	See *b* above	See *b* above.

d. Speed or Frequency Above or Below Normal.

Possible cause	*What to check*	*Remedy*
High or low dc input voltage	Test dc input voltage	Correct cause of high or low input voltage.

e. Excessive Sparking at Brushes.

Possible cause	*What to check*	*Remedy*
Brushes out of position	Check position of brush holder	Adjust brush holder.
	Check for broken brush spring	Replace broken spring.
	Check for broken or cracked brushes.	
Brush sticking in holder	Check for free brush movement	Clean brush and brush holder.
Overload on unit	Check load for shorts	Reduce load.

f. Unit Overheats.

Possible cause	*What to check*	*Remedy*
Unit overloaded	See *e* above	See *e* above.
Poor ventilation	Inspect ventilating air intake and outlet.	Clean ventilating air screens.

g. Bearings Overheated.

Possible cause	*What to check*	*Remedy*
Bearings misaligned	Check fit of endbells	Adjust seating of endbells.

h. Noisy Operation.

Possible cause	*What to check*	*Remedy*
Unit is loose	Inspect mounting bolts	Tighten mounting bolts.

i. Unit Causes Radio Interference.

Possible cause	*What to check*	*Remedy*
Faulty capacitor. Defective coil	Test capacitors	Replace faulty capacitor.
Sparking at commutator or sliprings.	Test coils for continuity and to ground	Repair or replace faulty part.
	Inspect commutator, sliprings, and brushes.	Clean commutator or sliprings; replace brushes.

5–6. Repair

When the troubleshooting procedure locates a fault in the motor generator requiring disassembly and reassembly in order to make the repair, follow the procedures below. Refer to figure 5–1 for an exploded view of the motor generator and to figure 5–2 for the schematic wiring diagram.

a. Disassembly is accomplished by proceeding with the following steps:

(1) Remove the ac brushes (A128).

(2) Remove the dc brushes (A111).

(3) Remove the inspection plate (A120) above the ac brushes.

(4) Remove the .01 μf mica capacitor (A163) (fig. 5–1) and the ac wires (fig. 4–1) from the ac brush holder assemblies.

(5) Remove the four hexagonal nuts and split lockwashers from the thru bolts of the frame. Remove the thru bolts.

(6) Remove the ac endbell (A193) from the field frame.

(7) Carefully remove the armature (A195) while holding the baffle plate (A198). Armature shaft bearings (A196 and A197) will remain on the shaft. After the armature is removed, the baffle plate (A198) will fall free; remove.

NOTE

If the armature shaft bearings have to be removed for replacement, proceed with (8) below. If not, omit this step.

(8) Remove the armature shaft bearings from the shaft, using a bearing puller.

(9) Remove the two dc leads to the dc brush holders (fig. 4–2).

(10) Remove the dc endbell (A161) from the field frame.

(11) Loosen the machine screws on the cable clamp (A008) that holds the input power cable to the filter box cover. Remove the four machine screws that hold the filter box cover (A017) to the filter box base (A095); lift the cover.

(12) Remove the two machine screws, hexagonal nuts, and lockwashers that hold the ac output receptacle (A010) in the filter box cover; remove the receptacle from the cover.

(13) Remove the dc input power wires from the dc input terminal block (A082), noting the terminals from which they were removed; remove the input cable and filter box cover from the rotary converter.

(14) Remove the heavy black and white field coil wires from the terminal block, noting the terminals from which they were removed. Remove the ac wires from the ground lug and choke coil L2 (A041). Remove the field coil wire from the terminal post connected to choke coil L1 (A036).

(15) Remove the four machine screws and lockwashers that secure the filter base assembly to the rotary converter; carefully remove the filter base assembly from the rotary converter frame, noting where the respective field coil wires come through the rubber grommets on the base.

NOTE

If the ac or dc brush holder assemblies have to be removed for replacement, proceed with (16) and (17) below. If not, omit these steps.

(16) Remove the setscrews that secure the ac brush holder assemblies in the ac endbell; remove the ac brush assemblies.

(17) Remove the four machine screws and lockwashers that secure the dc brush holder assemblies to the dc endbell; remove the two brush holder assemblies (A146).

b. Reassembly is accomplished by proceeding with the following steps. Replace worn or damaged parts with new parts.

(1) Guide the field coil wires through their respective grommets in the filter base assembly and position the filter base assembly on the rotary converter; secure the filter base to the converter with the four lockwashers and machine screws.

(2) Connect one ac wire to the ground lug and the other to choke coil L2 (A041).

(3) Connect the heavy black and white field

coil wires to the proper terminals on the terminal block from which they were removed.

(4) Connect field coil wire to the terminal post connected to choke coil L1.

NOTE

If the ac or dc brush holder assemblies were removed, proceed with (5) and (6) below. If not, omit these steps.

(5) Position the dc brush holder assemblies into the dc endbell, and secure the assemblies with the four machine screws and lockwashers which were removed.

(6) Position the ac brush holder assemblies into the ac endbell and secure the assemblies with the setscrews which were removed.

(7) Position the dc endbell onto the field frame and connect the two dc leads, which were removed, to the dc brush holders.

(8) Place the armature shaft bearings on each end of the shaft, if these were removed or replaced and carefully press them onto the shaft.

(9) Place the baffle plate into position and, while holding the plate, carefully insert the armature through the plate and field frame to the dc endbell. Be sure the armature shaft bearing (A197) seats properly in the dc endbell.

(10) Place the four thru bolts into the dc endbell through the field frame (A210) and baffle plate (A198).

(11) Position the ac endbell into place; use the four through bolts as guides, while carefully seating the armature shaft bearing in the ac endbell.

(12) Place the four hexagonal nuts and split lockwashers onto the through bolts. Carefully tighten them and, at the same time, turn the armature by hand to check for freedom of rotation.

(13) Connect the ac wires and mica capacitor (A163) to the ac brush holder assemblies.

(14) Replace the ac brushes (para 4–8*a*).

(15) Replace the dc brushes (para 4–8*b*).

(16) Connect the input power wires to the terminal block.

(17) Assemble the output receptacle in the filter box cover with two machine screws, lockwashers, and hexagonal nuts.

(18) Attach the cover to the filter box with four lockwashers and machine screws.

(19) Tighten the machine screws on the input power cable clamp.

(20) After testing (para 5–7), position the inspection plate above the ac brushes and secure. Position the metal inspection and filter covers on the dc endbell and secure.

5–7. Testing Motor Generator

a. After repair (para 5–6), plug the power cable into a 27.5-volt dc source. If test cables are needed, provide as shown in figure 6–1. Check both the ac and dc brushes for nonarcing operation, which indicates proper seating. If brushes are not seated, run unit for several hours and check for a minimum of three fourths of the face to be seated.

b. Measure the ac voltage and frequency, using Electrical Power Test Set TS–914/U.

CHAPTER 6

GENERAL SUPPORT AND DEPOT MAINTENANCE

6-1. General

General support and depot maintenance procedures in this paragraph and 6-2 through 6-5 supplement the procedures described in paragraphs 5-1 through 5-6. Tools and test equipment required to test and repair the motor generator are also listed. Applicable tests must be performed after the unit has been repaired.

6-2. Troubleshooting Procedures

The troubleshooting procedures for this category of maintenance are identical to those given in paragraphs 3-5, 4-10 and 5-4. Use the troubleshooting chart in paragraph 5-5.

6-3. Test Equipment, Tools, and Materials Required

The following chart lists the test equipment cables, connectors, and special tools required for general support and depot maintenance of the motor generator.

a. Test Equipment.

Nomenclature	Federal stock no.	Technical reference
Multimeter ME-26A/U	6625-646-9409	TM 11-6625-200-12
Multimeter TS-352B/U	6625-553-0142	TM 11-6625-366-15
Power Supply PP-1104B/G	6130-635-4900	TM-11-5126
Electrical Power Test Set TS-914/U	6625-542-1289	TM 11-6625-303-12

b. Tools.

Nomenclature	Federal stock no.	Technical reference
Toolkit, Electronic Equipment TK-105/G	5180-610-8177	SC 5180-91-CL-R07
Bearing Puller, Owatonna Tool Company No. 950 or equal.		

c. Other Equipment.

Nomenclature	Federal stock no.	Technical reference
Cable, power, electrical [a] (or any two conductor #10AWG cable).	6145-161-0768	Fig. 6-1
Cord, power CX-237(*)/U. [b]		Fig. 6-1
Resistor, 120 ohms 140 watts fixed, wirewound (3 ea).	5905-263-4099	None.
Clip, electrical: alligator style (3 ea)	5940-186-9833	None.

[a] Five feet long.
[b] Indicates CX-237/U and CX-237A/U.

6-4. Repair of Motor Generator

Follow the procedures for repair of the motor generator given in paragraph 5-6.

6-5. Testing Procedures

a. General. Testing procedures are prepared for use by Signal field maintenance shops and Signal service Organizations responsible for general support maintenance to determine the acceptability of repaired signal equipment. These procedures set forth specific requirements that repaired signal equipment must meet before it

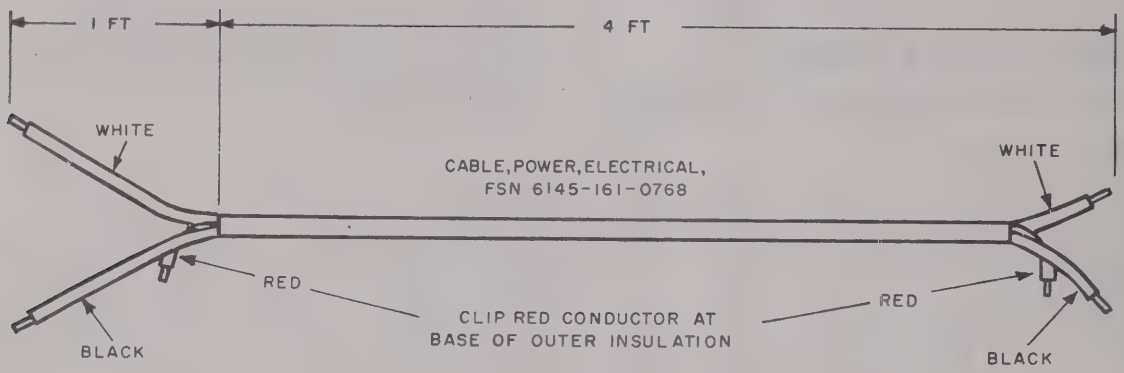
is returned to the using organization. The testing procedures may also be used as a guide for testing equipment repaired at direct support maintenance if the proper tools and test equipment are available. See paragraph 1–5*a* and *b* for performance standards.

b. Each test depends on the preceding one for certain operating procedures and, where applicable, for test equipment calibrations. Comply with the instructions preceding the body of each chart before proceeding to the chart. Perform each test in sequence. Do not vary the sequence. For each step, perform all the actions required in the *Test equipment control setting* and *Equipment under test control setting columns;* then perform each specific test procedure and verify it against its performance standard.

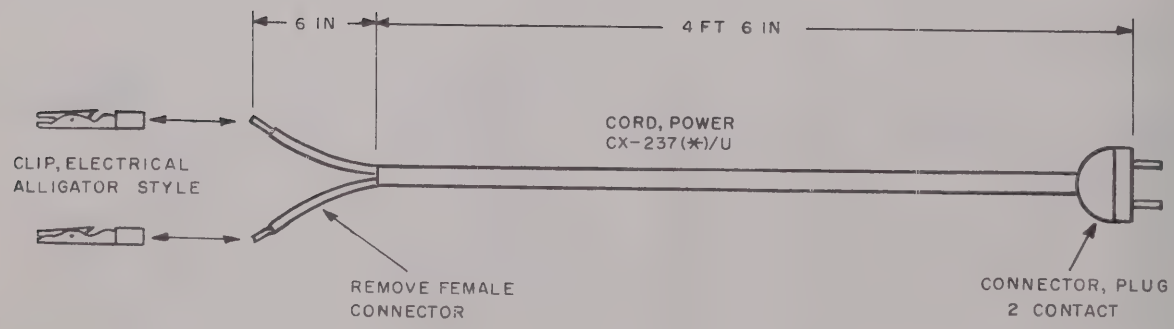
c. Special requirements. The following must be performed in preparation for the motor generator test (para 6–7).

(1) Loosen the motor generator filter box cover as much as necessary to remove Cable Assembly, Power CX–4541/U. Note the location of the black and white conductors.

(2) Fabricate special test cable No. 1 (fig. 6–1) and connect it in place of the CX–4541/U. Connect the black and white conductors at their proper terminals.



A. SPECIAL TEST CABLE NO. 1.



B. SPECIAL TEST CABLE NO. 2.

EL6125-252-15-TM-4

Figure 6–1. Special test cables.

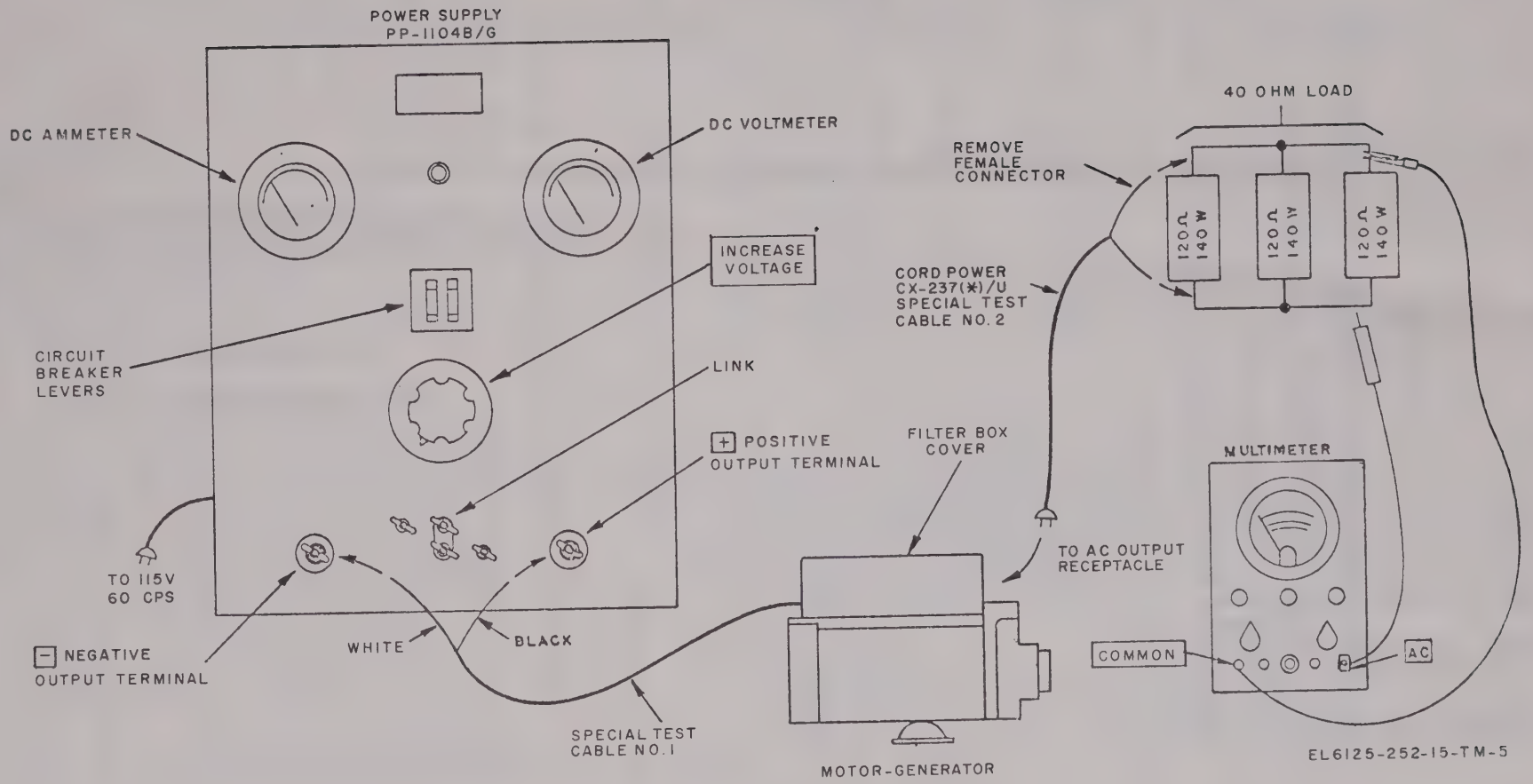


Figure 6–2. Motor generator, electrical tests.

6-6. Motor Generator, Physical Tests and Inspection

a. Test Equipment and Materials. None.

b. Test Connections and/or Conditions. None.

c. Test Procedure.

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
1	None	None	*a.* Check the rotary converter power cable insulation. *b.* Check air vents for accumulation of dirt or dust. *c.* Check ac output receptacles and brush caps for physical damage. *d.* Check unit for condition of finish Note. Touchup painting is recommended whenever practical. Screw heads and receptacles will not be painted or polished with abrasives.	*a.* Cable insulation should not be cracked or worn. *b.* Air vents should be clean and free from matter which could impair ventilation. *c.* Items mentioned should not be damaged. *d.* Only surfaces intended to be painted should be painted. Name plate should be clearly marked.

6-7. Motor Generator, Electrical Tests

a. Test Equipment and Materials.
Multimeter ME-26(*)/U.
Spceial test cable No. 1 (fig. 6-1)
Power Supply PP-1104(*)/G.
Cord, Power CX-237(*)/U. Test cable No. 2 (fig. 6-1).
Resistor, fixed, wirewound (3 each) 120 ohms, 140 watts.

b. Test Connections and/or Conditions. Connect equipment as illustrated in figure 6-2. Connect special test cable No. 1 as instructed in paragraph 6-5*c*.

c. Test Procedure.

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
1	*PP-1104(*)/G* INCREASE VOLTAGE: fully counterclockwise. Link: arranged as shown in figure. Circuit breaker lever: ON *ME-26(*)/U* FUNCTION switch: AC. RANGE switch: 300V.	None	*a.* Rotate PP-1104(*)/G INCREASE VOLTAGE clockwise, until dc voltmeter indicates 27.5 volts. *b.* Observe PP-1104(*)/G dc ammeter indication. *c.* Observe ME-26(*)/U meter indication.	*a. None.* *b.* Indication should not be greater than 24 amperes. *c.* Should indicate 115 ± 5 volts.

CHAPTER 7

PREPARATION OF EQUIPMENT FOR RESHIPMENT AND DEMOLITION TO PREVENT ENEMY USE

Section I. PREPARATION OF EQUIPMENT FOR RESHIPMENT

7-1. General

The motor generator is normally shipped in a lined, corrugated paper carton. The preparations for local shipment and for limited storage are the same.

7-2. Repackaging for Shipment or Limited Storage

The exact procedure for repackaging depends on the material available and the conditions under which the equipment is to be shipped or stored. Secure all loose items and cables. Adapt the procedures outlined below whenever possible. The information contained in the original packaging (para 2-1) will also be helpful.

a. Material Requirements. The following materials are required for packing Motor Generator PU-724/G. For stock numbers of materials, consult SB 38-100.

Material	*Quantity*
Waterproof paper	10 sq ft
Waterproof tape	15 ft
Corrugated cardboard	30 sq ft
Gummed paper tape	30 ft
Plywood, ⅜ in.	7½ in × 15 in

b. Packaging. The motor generator is to be packaged as follows:

(1) Mount unit on plywood base.

(2) Make inside carton to accept unit.

(3) Make filler and place filler and motor generator in inside carton.

(4) Wrap with waterproof paper and seal.

(5) Make outside carton to accept package in (4) above.

(6) Secure the wrap with gummed tape.

Section II. DEMOLITION TO PREVENT ENEMY USE

7-3. Authority for Demolition

a. The demolition procedures given in paragraph 7-4 will be used to prevent the enemy from using or salvaging this equipment. Demolition of the equipment will be accomplished only upon the order of the commander.

b. If a destruction plan is not provided by higher authority, one should be prepared by the organization using the equipment. In this plan, personnel should be assigned specific destruction tasks, but all personnel in the using organization should be familiar with all aspects of the complete destruction plan. The plan must be adequate and easily carried out in the field and must provide for as complete a destruction as available time, equipment, and personnel will permit. Because the time required for complete destruction may not always be available, the destruction plan must establish priorities so that essential parts of the equipments will be destroyed in the order of their importance. Systematic destruction of the same important units of equipment of a given type will prevent the enemy from learning the important features of the equipment or assembling a complete equipment by cannibalization of partially destroyed equipment. Adequate destruction of some units of equipment should always be accomplished rather than partial destruction of all units. Which of the methods listed in paragraph 7-4 is to be used depends on the time available for destruction.

7-4. Methods of Destruction

a. Destruction Priority. Any or all methods of destruction given in *b* through *g* below may be used. The time available will be the major determining factor for the method to be used.

b. Smash. Smash the filter box, endbells, and shell; use sledges, hammers, axes, crowbars, and other heavy tools.

c. Cut. Cut the cords, cables, and wiring; use axes, handaxes, or machetes.

d. Burn. Burn the cords, wiring, manuals, and components; use gasoline, kerosene, oil, flamethrowers or incendiary grenades.

e. Bend. Bend filter box, connectors, and adapters.

WARNING

Be extremely careful with explosives and incendiary devices. Use these items only when the need is urgent.

f. Explosives. If explosives are necessary, use firearms, grenades, or TNT.

g. Disposal. Burn or scatter the destroyed parts in slit trenches, foxholes, or other holes, or throw them into nearby streams.

APPENDIX A

REFERENCES

Following is a list of applicable references available to the personnel concerned with Motor Generator PU-724/G.

DA Pam 310-4	Index of Technical Manuals, Technical Bulletins, Supply Manuals (Types 7, 8, and 9) Supply Bulletins, and Lubrication Orders
DA Pam 310-7	U. S. Army Equipment Index of Modification Work Orders
SB 38-100	Preservation, Packaging and Packing Materials, Supplies and Equipment Used by the Army
TM 38-750	The Army Maintenance Management Systems (TAMMS).
TM 11-5815-204-10	Operator's Manual, Radio Teletypewriter Sets AN/GRC-46, AN/GRC-46A, AN/GRC-46B and AN/VRC-29
TM 11-5815-204-20	Organizational Maintenance Manual, Radio Teletypewriter Sets, and AN/GRC-46, AN/GRC-46A, AN/GRC-46B and AN/VRC-29
TM 11-5815-204-35	Field and Depot Maintenance Manual Radio Teletypewriter Sets, AN/GRC-46, AN/GRC-46A and AN/GRC-46B and AN/VRC-29

APPENDIX B
MAINTENANCE ALLOCATION

Section I. INTRODUCTION

B-1. General

This appendix provides a summary of the maintenance operations for Motor-Generator PU-724/G. It authorizes categories of maintenance for specific maintenance functions on repairable items and components and the tools and equipment required to perform each function. This appendix may be used as an aid in planning maintenance operations.

B-2. Maintenance Function

Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination.

b. Test. To verify serviceability and to detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition; i.e., to clean (decontaminate), to preserve, to drain, to paint, or to replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.

d. Adjust. To maintain, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to the specified parameters.

e. Align. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test measuring and diagnostic equipments used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Install. The act of emplacing, seating, or fixing into position an item, part, module (component or assembly) in a manner to allow the proper functioning of the equipment or system.

h. Replace. The act of substituting a serviceable like type part, subassembly, or module (component or assembly) for an unserviceable counterpart.

i. Repair. The application of maintenance services (inspect, test, service, adjust, align, calibrate, replace) or other maintenance actions (welding, grinding, riveting, straightening, facing, remachining, or resurfacing) to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. Overhaul. That maintenance effort (service/action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards (i.e., DMWR) in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours, miles, etc.) considered in classifying Army equipments/components.

B-3. Column Entries

a. Column 1, Group Number. Column 1 lists group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column 2, Component/Assembly. Column 2 contains the noun names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Functions. Column 3 lists the functions to be performed on the item listed in column 2. When items are listed without maintenance functions, it is solely for purpose of having the group numbers in the MAC and RPSTL coincide.

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a "work time" figure in the appropriate subcolumn(s), the lowest level of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate "work time" figures will be shown for each category. The

number of task hours specified by the "work time" figure represents the average time required to restore an item (assembly, subassembly, component, module, end item or system) to a servicable condition under typical field operating conditions. This time includes preparation time, troubleshooting time, and quality assurance/quality control time in addtion to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. Subcolumns of column 4 are as follows:

C — Operator/Crew
O — Organizational
F — Direct Support
H — General Support
D — Depot

e. Column 5, Tools and Equipment. Column 5 specifies by code, those common tool sets (not individual tools) and special tools, test, and support equipment required to perform the designated function.

f. Column 6, Remarks. Column 6 contains an alphabetic code which leads to the remark in section IV, Remarks, which is pertinent to the item opposite the particular code.

B-4. Tool and Test Equipment Requirements (Sec III).

a. Tool or Test Equipment Reference Code. The numbers in this column coincide with the numbers used in the tools and equipment column of the MAC. The numbers indicate the applicable tool or test equipment for the maintenance functions.

b. Maintenance Category. The codes in this column indicate the maintenance category allocated the tool or test equipment.

c. Nomenclature. This column lists the noun name and nomenclature of the tools and test equipment required to perform the maintenance functions.

d. National/NATO Stock Number. This column lists the National/NATO stock number of the specific tool or test equipment.

e. Tool Number. This column lists the manufacturer's part number of the tool followed by the Federal Supply Code for manufacturers (5-digit) in parentheses.

B-5. Remarks (Sec IV).

a. Reference Code. This code refers to the appropriate item in section II, column 6.

b. Remarks. This column provides the required explanatory information necessary to clarify items appearing in section II.

SECTION II MAINTENANCE ALLOCATION CHART
FOR

TM 11-6125-252-15

MOTOR GENERATOR PU-724/G

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQPT.	(6) REMARKS
			C	O	F	H	D		
00	Motor Generator	Inspect	0.2						A
	PU-724/G	Test		0.2				1	
		Test			0.3			2, 3	
		Test				0.3		2, 3, 4,5	
		Service			0.3			6	
		Adjust			0.3			6	
		Replace		0.3				1	
		Repair		0.3				1	B
		Repair			1.0			6, 7	
		Rebuild					4.0	6, 7	

SECTION III TOOL AND TEST EQUIPMENT REQUIREMENTS
FOR

TM 11-6125-252-15

MOTOR - GENERATOR PU-724/G

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL NATO STOCK NUMBER	TOOL NUMBER
1	O	Tool Equipment TE-50B	5180-00-356-4602	
2	F, H, D	Multimeter TS - 352 B/U	6625-00-553-0142	
3	F, H, D	Electrical Power Tester AN/UPM - 100 (see note 1)	6625-00-542-1290	
4	H, D	Multimeter ME - 26 ( ) /U	6625-00-646-9409	
5	H, D	Power Supply PP-1104B/G or equiv	6130-00-635-4900	
6	F, H, D	Tool Kit, Electronic equipment TK-105/G	5180-00-610-8177	
7	F, H, D	Bearing puller	*	

* THE NATIONAL STOCK NUMBER THAT IS MISSING FROM THIS LIST HAS BEEN REQUESTED AND WILL BE ADDED BY A CHANGE TO THE LIST UPON RECEIPT.

Note 1: Contains electrical power test set TS-914/U.

REFERENCE CODE	REMARKS
A	Exterior and brushes
B	Repair by replacement of brushes

APPENDIX C

ORGANIZATIONAL, DIRECT SUPPORT, GENERAL SUPPORT, AND DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOL LISTS

Section I. INTRODUCTION

C-1. Scope

This appendix lists repair parts and special tools required for the performance of organizational, direct support, general support, and depot maintenance of the PU-724/G.

C-2. General

This repair parts and special tools list is divided into the following sections:

a. Prescribed Load Allowance (PLA)—Section II. Not applicable.

b. Repair Parts for Organizational Maintenance—Section III. A list of repair parts authorized for the performance of maintenance at the organizational level.

c. Special Tools, Test, and Support Equipment for Organizational Maintenance—Section IV. Not applicable.

d. Repair Parts for Direct Support, General Support, and Depot Maintenance—Section V. A list of repair parts authorized for the performance of maintenance at the direct support, general support, and depot level.

e. Special Tools, Test, and Support Equipment for Direct Support, General Support, and Depot Maintenance—Section VI. Not applicable.

f. Index-Federal Stock Number or Reference Number Cross-Reference to Figure and Item Number or Reference Designation—Section VII. A list of Federal stock numbers in ascending numerical sequence (sec. VII.1), followed by a list of reference numbers appearing in ascending alphanumeric sequence (sec. VII.2), cross-referenced to the figure number and reference designation.

g. Index—Reference Designation Cross-Reference to Page Number—Section VIII. A list of reference designations cross-referenced to page numbers.

C-3. Explanation of Columns

The following provides an explanation of columns in the tabular lists:

a. Source, Maintenance, and Recoverability Codes (SMR).

(1) Source codes indicate the selection status and source for the list item. Source codes are—

Code	*Explanation*
P	Repair parts which are stocked in or supplied from the GSA/DSA, or Army supply system and authorized for use at indicated maintenance categories.
P2	Repair parts which are procured and stocked for insurance purposes because the combat or military essentiality of the end item dictates that a minimum quantity be available in the supply system.
P9	Assigned to items which are NSA design controlled: unique repair parts, special tools, test, measuring and diagnostic equipment, which are stocked and supplied by the Army COMSEC logistic system, and which are not subject to the provisions of AR 380-41.
P10	Assigned to items which are NSA design controlled: special tools, test, measuring and diagnostic equipment for COMSEC support, which are accountable under the provisions of AR 380-41, and which are stocked and supplied by the Army COMSEC logistic system.
M	Repair parts which are not procured or

Code	Explanation
	stocked, but are to be manufactured in indicated maintenance levels.
A	Assemblies which are not procured or stocked as such, but are made up of two or more units. Such component units carry individual stock numbers and descriptions, are procured and stocked separately and can be assembled to form the required assembly at indicated maintenance categories.
X	Parts and assemblies which are not procured or stocked and the mortality of which normally is below that of the applicable end item or component. The failure of such part or assembly should result in retirement of the end item from the supply system.
X1	Repair parts which are not procured or stocked. The requirement for such items will be filled by use of the next higher assembly or component.
X2	Repair parts which are not stocked. The indicated maintenance category requiring such repair parts will attempt to obtain same through cannibalization. Where such repair parts are not obtainable through cannibalization, requirements will be requisitioned, with accompanying justification, through normal supply channels.
G	Major assemblies that are procured with PEMA funds for initial issue only as exchange assemblies at DSU and GSU level. These assemblies will not be stocked above DS and GS level or returned to depot supply level.

(2) Maintenance codes indicate the lowest category of maintenance authorized to install the listed item. The maintenance level codes are—

Code	Explanation
C	Operator/crew
O	Organizational maintenance
F	Direct support maintenance
H	General support maintenance
D	Depot maintenance

(3) Recoverability codes indicates whether unserviceable items should be returned for recovery or salvage. Items not coded are expendable. Recoverability codes are—

Code	Explanation
R	Repair parts and assemblies that are economically repairable at DSU and GSU activities and are normally furnished by supply on an exchange basis.
S	Repair parts and assemblies which are economically repairable at DSU and GSU activities and which normally are furnished by supply on an exchange basis. When items are determined by GSU to be uneconomically repairable, they will be evacuated to a depot for evaluation and analysis before final disposition.
T	High-dollar value recoverable repair parts which are subject to special handling and are issued on an exchange basis. Such repair parts normally are repaired or overhauled at depot maintenance activities.
U	Repair parts specifically selected for salvage by reclamation units because of precious metal content, critical materials, or high-dollar value reusable casings or castings.

b. Federal Stock Number. Indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. Indicates the Federal item name and any additional description of the item required. The index number has been included as part of the description to aid in the location of "SAME AS" items. A part number or other reference number is followed by the applicable five-digit Federal supply code for manufacturers in parentheses.

d. Unit of Measure (U/M). A two-character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based, e.g., ft, ea, pr, etc.

e. Quantity Incorporated in Unit. Indicates the quantity of the item used in the PU-724/G. Subsequent appearances of the same item in the same assembly are indicated by the letters "REF".

f. 15-Day Organizational Maintenance Allowances.

(1) The allowance columns are divided into four subcolumns. Indicated in each subcolumn opposite the first appearance of each item is the total quantity of items authorized for the number of equipments supported. Subsequent appearances of the same item will have the letters

"REF" in the allowance columns. Items authorized for use as required, but not for initial stockage, are identified with an asterisk in the allowance column.

(2) The quantitative allowances for organizational level of maintenance represents one initial prescribed load for a 15-day period for the number of equipments supported. Units and organizations authorized additional prescribed loads will multiply the number of prescribed loads authorized by the quantity of repair parts reflected in the appropriate density column to obtain the total quantity of repair parts authorized.

(3) Organizational units providing maintenance for more than 100 of these equipments shall determine the total quantity of parts required by converting the equipment quantity to a decimal factor by placing a decimal point before the next to last digit of the number to indicate hundredths, and multiplying the decimal factor by the parts quantity authorized in the 51–100 allowance column. *Example,* authorized allowance for 51–100 equipments is 12; for 140 equipments multiply 12 by 1.40 or 16.80 rounded off to 17 parts required.

g. 30-Day DS/GS Maintenance Allowances.

NOTE

Allowances in GS column are for GS maintenance only.

(1) The allowance columns are divided into three subcolumns. Indicated in each subcolumn, opposite the first appearance of each item, is the total quantity of items authorized for the number of equipments supported. Subsequent appearances of the same item will have the letters "REF" in the applicable allowance columns. Items authorized for use as required, but not for initial stockage, are identified with an asterisk in the allowance column.

(2) The quantitative allowances for DS/GS levels of maintenance will represent initial stockage for a 30-day period for the number of equipments supported.

(3) Determination of the total quantity of parts required for maintenance of more than 100 of these equipments can be accomplished by converting the equipment quantity to a decimal factor by placing a decimal point before the next to last digit of the number to indicate hundredths, and multiplying the decimal factor by the parts quantity authorized in the 51–100 allowance column. *Example,* authorized allowance for 51–100 equipments is 40; for 150 equipments multiply 40 by 1.50 or 60 parts required.

h. One-Year Allowances per 100 Equipments/ Contingency Planning Purposes. Indicates opposite the first appearance of each item the total quantity required for distribution and contingency planning purposes. The range of items indicates total quantities of all authorized items required to provide for adequate support of 100 equipments for 1 year.

i. Depot Maintenance Allowance per 100 Equipments. Indicates opposite the first appearance of each item the total quantity authorized for depot maintenance of 100 equipments. Subsequent appearances of the same item will have the letters "REF" in the allowance column. Items authorized for use as required, but not for initial stockage, are identified with as asterisk in the allowance column.

j. Illustrations.

(1) *Figure number.* Indicates the figure number in which the item is shown.

(2) *Item number or reference designation.* Indicates the reference designation used to identify the item in the illustration.

C–4. Special Information

Repair parts mortality is computed from failure rates derived from experience factors with the individual parts in a variety of equipments. Variations in the specific application and periods of use of electronics equipment, the fragility of electronic piece parts, plus intangible material and quality factors intrinsic to the manufacture of electronic parts, do not permit mortality to be based on hours of end item use. However, long periods of continuous use under adverse conditions are likely to increase repair parts mortality.

C–5. Location of Repair Parts

a. This appendix contains two cross-reference indexes (secs. VII and VIIX) to be used to locate a repair part when either the Federal stock number, reference number (manufacturer's part number), or reference designation is known. The first column in each index is prepared in numerical and/or alphanumerical sequence in ascending order. Where a Federal stock number is listed, refer to section VII.1. Where a Federal stock number is not listed, refer to section VII.2.

b. When the Federal stock number is known,

follow the procedures given in (1) and (2) below.

(1) Refer to section VII.1 (index of Federal stock numbers) or section VII.2 (index of reference numbers) and note the applicable figure and reference designation.

(2) When the reference designation is determined, refer to the reference designation index (sec. VIII). The reference designations are listed in numericalpha ascending order and are cross-referenced to the page number on which they appear in the repair parts list (secs. III and V). Refer to the page number noted in the index and locate the reference designation in the repair parts list (col. 7b, or col. 10b). If the description column indicates that it is a "Same as" item, locate the first appearance of the item by the index number (sequence number) referenced.

c. When the reference designation is known, follow the procedures given in *b*(2) above.

d. When neither the FSN, reference number, nor reference designation is known, identify the part in the illustration and follow directions given in *c* above, or scrutinize column 3 of the repair parts lists (secs. III and V).

C-6. Federal Supply Code for Manufacturers

Code	*Manufacturer*
30887	Dyna Technology, Inc.
43334	New Departure-Hyatt Bearings Division, General Motors Corp.
59730	Thomas and Betts Co., The
70485	Atlantic India Rubber Works, Inc.
75382	Kulka Electric Corp.
76473	Midwest Moulding and Mfg. Co.
96906	Military Standards

[Next page is C-4]

SECTION III. REPAIR PARTS FOR ORGANIZATIONAL MAINTENANCE

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Mfr Code USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATIONS (a) FIG NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
	6125-617-1435	A001 MOTOR GENERATOR PU-724/G: (This item is nonexpendable)								
P-O	5977-617-1259	A109 BRUSH SET ELECTRICAL CONTACT: A27997 (30887)								
P-O	5975	A125 CAP ELECTRICAL: A25099 (76473)								
P-O	5975	A126 CAP ELECTRICAL: SAME AS A125								
P-O	5977-617-1954	A127 BRUSH SET ELECTRICAL CONTACT: A27996 (30887)								

SECTION [illegible] REPAIR PARTS FOR DIRECT SUPPORT, GENERAL SUPPORT, AND DEPOT MAINTENANCE

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION — REFERENCE NUMBER & MFR. CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
		[illegible]											1-1	1A1MG
[illegible]		[illegible]												1A2FL
[illegible]		[illegible]												1A1H4
[illegible]		[illegible]	EA											1A1H4
[illegible]		[illegible]	EA											1A3MP
[illegible]		[illegible]	EA											1A2H4
[illegible]		[illegible]	EA											1A2H4
[illegible]		[illegible]	EA	1										1A3MP1
X2-1	[illegible]	[illegible] PLATE: A27[illegible]	EA	1										1A3H2
[illegible]	[illegible]	[illegible]	EA	1	*	*	*	*	*	*	4	11	5-1	1A3J1
[illegible]-F		[illegible] NUT PLAIN HEXAGON: MS[illegible]	EA	2										1A3H1
[illegible]-F		[illegible] NUT PLAIN HEXAGON: SAME AS A011	EA	REF										1A3H2
X2-F	5305	A003 SCREW MACHINE: SAME AS A003	EA	2										1A3H3
X2-F	5305	A004 SCREW MACHINE: SAME AS A003	EA	REF										1A3H4
X2-F		A005 WASHER LOCK: SAME AS A007	EA	2										1A3H5
X2-F		A006 WASHER LOCK: SAME AS A007	EA	REF										1A3H6
M-I		A[illegible] COVER BOX FILTER: C27345 (30887)	EA	1										1A3MP3
A-F-X		A008 FILTER ASSEMBLY: C27439 (30887)	EA	1										1A4FL
P-F	5910-577-9293	A019 CAPACITOR FIXED PAPER DIELEC: A27437 (30887)	EA	1	*	*	*	*	*	*	5	7	5-1	1A4C1
X2-F	5310-013-4530	A020 NUT PLAIN HEXAGON: MS35649-62 (96906)	EA	3										1A4H1
X2-F	5305	A021 SCREW MACHINE: MS35357 (96906)	EA	3										1A4H2
X2-F	5310	A022 WASHER LOCK: MS35358 (96906)	EA	3										1A4H3
P-F	5910-171-2952	A023 CAPACITOR FIXED PAPER DIELEC: A27422 (30887)	EA	1	*	*	*	*	*	*	5	7	5-1	1A4C2
X2-F	5305	A024 SCREW MACHINE: MS35357-41 (96906)	EA	2										1A4H4
X2-F	5305	A025 SCREW MACHINE: SAME AS A024	EA	REF										1A4H5
X2-F		A026 WASHER LOCK: SAME AS A007	EA	2										1A4H6
X2-F		A027 WASHER LOCK: SAME AS A007	EA	REF										1A4H7
P-F		A028 CAPACITOR FIXED PAPER DIELEC: A27442 (30887)	EA	1	*	*	*	*	*	*	5	7	5-1	1A4C3
X2-F	5310-013-4530	A029 NUT PLAIN HEXAGON: SAME AS A020	EA	REF										1A4H8
X2-F	5305	A030 SCREW MACHINE: SAME AS A021	EA	REF										1A4H9
X2-F	5310	A031 WASHER LOCK: SAME AS A022	EA	REF										1A4H10
P-F		A032 CAPACITOR FIXED PAPER DIELEC: A27438 (30887)	EA	1	*	*	*	*	*	*	5	7	5-1	1A4C4

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR. CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
X2-F	5310-013-4530	A033 NUT PLAIN HEXAGON: SAME AS A020		EA	REF										1A4H11
X2-F	5305	A034 SCREW MACHINE: SAME AS AC21		EA	REF										1A4H12
X2-F	5310	A035 WASHER LOCK: SAME AS A022		EA	REF										1A4H13
P-F	5950-656-2349	A036 COIL RADIO FREQUENCY: A72425 (30887)		EA	1	*	*	*	*	*	*	4	4	5-1	1A4L1
X2-F	5970-496-8548	A037 INSULATOR STANDOFF: A27346 (30887)		EA	5										1A4E1
X2-F	5305	A038 SCREW MACHINE: A27443 (30887)		EA	5										1A4H14
X2-F	5305	A039 WASHER FLAT: A27724 (30887)		EA	9										1A4H15
X2-F	5305	A040 WASHER LOCK: A5746 (30887)		EA	9										1A4H16
P-F	5950-656-2350	A041 COIL RADIO FREQUENCY: A27412 (30887)		EA	1	*	*	*	*	*	*	4	4	5-1	1A4L2
X2-F	5970-496-8548	A042 INSULATOR STANDOFF: SAME AS A037		EA	REF										1A4E2
X2-F	5970-496-8548	A043 INSULATOR STANDOFF: SAME AS A037		EA	REF										1A4E3
X2-F	5970	A044 INSULATOR WASHER: A27441 (30887)		EA	4										1A4E4
X2-F	5970	A045 INSULATOR WASHER: SAME AS A044		EA	REF										1A4E5
M-F		A046 LEAD ELECTRICAL: A27424 (30887)		EA	1										1A4W1
X2-F	5310	A047 NUT PLAIN HEXAGON: A5483 (30887)		EA	8										1A4H17
X2-F	5310	A048 NUT PLAIN HEXAGON: SAME AS A047		EA	REF										1A4H18
X2-F	5310	A049 NUT PLAIN HEXAGON: SAME AS A047		EA	REF										1A4H19
X2-F	5310	A050 NUT PLAIN HEXAGON: SAME AS A047		EA	REF										1A4H20
X2-F	5305	A051 SCREW MACHINE: SAME AS A038		EA	REF										1A4H21
X2-F	5305	A052 SCREW MACHINE: SAME AS A038		EA	REF										1A4H22
X2-F	5305	A053 WASHER FLAT: SAME AS A039		EA	REF										1A4H23
X2-F	5305	A054 WASHER FLAT: SAME AS A039		EA	REF										1A4H24
X2-F	5305	A055 WASHER FLAT: SAME AS A039		EA	REF										1A4H25
X2-F	5305	A056 WASHER FLAT: SAME AS A039		EA	REF										1A4H26
X2-F	5305	A057 WASHER LOCK: SAME AS A040		EA	REF										1A4H27
X2-F	5305	A058 WASHER LOCK: SAME AS A040		EA	REF										1A4H28
X2-F	5305	A059 WASHER LOCK: SAME AS A040		EA	REF										1A4H29
X2-F	5305	A060 WASHER LOCK: SAME AS A040		EA	REF										1A4H30
X2-F	5325-290-4344	A061 GROMMET RUBBER: 1787 (70485)		EA	2										1A4E6
X2-F	5325-290-4344	A062 GROMMET RUBBER: SAME AS A061		EA	REF										1A4E7
X2-F	5970-496-8548	A063 INSULATOR STANDOFF: SAME AS A037		EA	REF										1A4E8
X2-F	5970	A064 INSULATOR WASHER: SAME AS A044		EA	REF										1A4E9
X2-F	5310	A065 NUT PLAIN HEXAGON: SAME AS A047		EA	REF										1A4H31

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR. CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
X2-F	5310	A066 NUT PLAIN HEXAGON: SAME AS A047		EA	REF										1A4H32
X2-F	5305	A067 SCREW MACHINE: SAME AS A038		EA	REF										1A4H33
X2-F	5305	A068 WASHER FLAT: SAME AS A039		EA	REF										1A4H34
X2-F	5305	A069 WASHER FLAT: SAME AS A039		EA	REF										1A4H35
X2-F	5305	A070 WASHER LOCK: SAME AS A040		EA	REF										1A4H36
X2-F	5305	A071 WASHER LOCK: SAME AS A040		EA	REF										1A4H37
X2-F	5970-496-8548	A072 INSULATOR STANDOFF: SAME AS A037		EA	REF										1A4E10
X2-F	5970	A073 INSULATOR WASHER: SAME AS A044		EA	REF										1A4E10
M-D		A074 LEAD ELECTRICAL: A27428 (30887)		EA	1										1A4W2
X2-F	5310	A075 NUT PLAIN HEXAGON: SAME AS A047		EA	REF										1A4H38
X2-F	5310	A076 NUT PLAIN HEXAGON: SAME AS A047		EA	REF										1A4H39
X2-F	5305	A077 SCREW MACHINE: SAME AS A038		EA	REF										1A4H40
X2-F	5305	A078 WASHER FLAT: SAME AS A039		EA	REF										1A4H41
X2-F	5305	A079 WASHER FLAT: SAME AS A039		EA	REF										1A4H42
X2-F	5305	A080 WASHER LOCK: SAME AS A040		EA	REF										1A4H43
X2-F	5305	A081 WASHER LOCK: SAME AS A040		EA	REF										1A4H44
P-F	5940-983-6043	A082 TERMINAL BOARD: 602M2F (75382)		EA	1	*	*	*	*	*	*	5	7	5-1	1A4TB1
X2-F	5305	A083 SCREW MACHINE: MS35359-46 (96906)		EA	4										1A4H45
X2-F	5305	A084 SCREW MACHINE: SAME AS A083		EA	REF										1A4H46
X2-F	5305	A085 SCREW MACHINE: SAME AS A083		EA	REF										1A4H47
X2-F	5305	A086 SCREW MACHINE: SAME AS A083		EA	REF										1A4H48
X2-F	5310	A087 WASHER FLAT: A6631 (30887)		EA	4										1A4H49
X2-F	5310	A088 WASHER FLAT: SAME AS A087		EA	REF										1A4H50
X2-F	5310	A089 WASHER FLAT: SAME AS A087		EA	REF										1A4H51
X2-F	5310	A090 WASHER FLAT: SAME AS A087		EA	REF										1A4H52
X2-F		A091 WASHER LOCK: SAME AS A007		EA	4										1A4H53
X2-F		A092 WASHER LOCK: SAME AS A007		EA	REF										1A4H54
X2-F		A093 WASHER LOCK: SAME AS A007		EA	REF										1A4H55
X2-F		A094 WASHER LOCK: SAME AS A007		EA	REF										1A4H56
M-D		A095 BRACKET MOUNTING FILTER: B27420 (30887)		EA	1										1A4MP1
A-D-R		A096 MOTOR GENERATOR LESS FILTER: C27386 (30887)		EA	1										1A5MG
M-D		A097 COVER ELEC CONT BRUSH ACCESS: A27375 (30887)		EA	2										1A5MP1
M-D		A098 COVER ELEC CONT BRUSH ACCESS: SAME AS A097		EA	REF										1A5MP2
X2-F	5970	A099 INSULATION SHEET ELECTRICAL: A27376 (30887)		EA	2										1A5E1
X2-F	5970	A100 INSULATION SHEET ELECTRICAL: SAME AS A099		EA	REF										1A5E2

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR. CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
X2-F	5305	A101 SCREW MACHINE: SAME AS A003	EA	4										1A5H1
X2-F	5305	A102 SCREW MACHINE: SAME AS A003	EA	REF										1A5H2
X2-F	5305	A103 SCREW MACHINE: SAME AS A003	EA	REF										1A5H3
X2-F	5305	A104 SCREW MACHINE: SAME AS A003	EA	REF										1A5H4
X2-F		A105 WASHER LOCK: SAME AS A004	EA	4										1A5H5
X2-F		A106 WASHER LOCK: SAME AS A004	EA	REF										1A5H6
X2-F		A107 WASHER LOCK: SAME AS A004	EA	REF										1A5H7
X2-F		A108 WASHER LOCK: SAME AS A004	EA	REF										1A5H8
P-O	5977-617-1259	A109 BRUSH SET ELECTRICAL CONTACT: A27997 (30887)	SET	1	*	*	*	*	*	*	5	-	5-1	1A5E4
X1		A110 BRUSH ELECTRICAL CONTACT: A27243 (30887)	EA	1										1A5E4
X1		A111 BRUSH ELECTRICAL CONTACT: A27243-1 (30887)	EA	1										1A5E5
X2-F	5305	A112 SCREW MACHINE: SAME AS A003	EA	4										1A5H9
X2-F	5305	A113 SCREW MACHINE: SAME AS A003	EA	REF										1A5H10
X2-F	5305	A114 SCREW MACHINE: SAME AS A003	EA	REF										1A5H11
X2-F	5305	A115 SCREW MACHINE: SAME AS A003	EA	REF										1A5H12
X2-F		A116 WASHER LOCK: SAME AS A007	EA	4										1A5H13
X2-F		A117 WASHER LOCK: SAME AS A007	EA	REF										1A5H14
X2-F		A118 WASHER LOCK: SAME AS A007	EA	REF										1A5H15
X2-F		A119 WASHER LOCK: SAME AS A007	EA	REF										1A5H16
M-D		A120 COVER PLATE ACCESS: A27377 (30887)	EA	1										1A5MP3
X2-F	5305	A121 SCREW MACHINE ROUND HEAD: MS35357-77 (96906)	EA	2										1A5H17
X2-F	5305	A122 SCREW MACHINE ROUND HEAD: SAME AS A121	EA	REF										1A5H18
X2-F	5310-582-5965	A123 WASHER LOCK: MS35338-44 (96906)	EA	2										1A5H19
X2-F	5310-582-5965	A124 WASHER LOCK: SAME AS A123	EA	REF										1A5H20
P-O	5975	A125 CAP ELECTRICAL: A25099 (76473)	EA	2	*	*	1	*	*	1	10	7	5-1	1A5MP4
P-O	5975	A126 CAP ELECTRICAL: SAME AS A125	EA	REF	REF	REF	REF	REF	REF	REF	REF	REF		1A5MP5
P-O	5977-617-1954	A127 BRUSH SET ELECTRICAL CONTACT: A27996 (30887)	SET	1	*	*	1	*	*	1	8	20	5-1	1A5E6
X1		A128 BRUSH ELECTRICAL CONTACT: A27339 (30887)	EA	2										1A5E6
X1		A129 BRUSH ELECTRICAL CONTACT: SAME AS A128	EA	REF										1A5E7
A-F-R		A130 END BELL ASSEMBLY - INPUT: C27353 (30887)	EA	1										1A6MP1
X2-F		A131 NUT PLAIN HEXAGON: MS35650-102 (96906)	EA	4										1A5H4
X2-F	5305	A132 SCREW MACHINE: A26965 (30887)	EA	4										1A5H4
X2-F	5310-045-3296	A133 WASHER LOCK: MS35338-43 (96906)	EA	4										1A5H4
X2-F	6125	A134 STRIP CONNECTING ELECTRICAL: A40941-1 (30887)	EA	1										1A6W1

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR. CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
P-F	5910-577-9125	A135 CAPACITOR FIXED PAPER DIELEC: A40877 (30887)		EA	1	*	*	*	*	*	*	5	7	5-1	1A6C1
X2-F		A136 NUT PLAIN HEXAGON: SAME AS A131		EA	1										1A6H1
X2-F	5305	A137 SCREW MACHINE: MS35359-64 (96906)		EA	1										1A6H2
X2-F	5310	A138 WASHER LOCK: MS35335-16 (96906)		EA	1										1A6H3
P-F	5977-409-0908	A139 HOLDER ELECTRICAL CONT BRUSH: A27357 (30887)		EA	1	*	*	*	*	*	*	4	2	5-1	1A6MP2
X2-F	5305	A140 SCREW MACHINE: A27390 (30887)		EA	4										1A6H4
X2-F	5305	A141 SCREW MACHINE: SAME AS A140		EA	REF										1A6H5
X2-F	5310	A142 WASHER FLAT: A25551 (30887)		EA	4										1A6H6
X2-F	5310	A143 WASHER FLAT: SAME AS A142		EA	REF										1A6H7
X2-F	5310-045-3296	A144 WASHER LOCK: SAME AS A133		EA	4										1A6H8
X2-F	5310-045-3296	A145 WASHER LOCK: SAME AS A133		EA	REF										1A6H9
P-F	5977-409-0909	A146 HOLDER ELECTRICAL CONT BRUSH: A27381 (30887)		EA	1	*		*	*	*	*	4	2	5-1	1A6MP3
X2-F	5305	A147 SCREW MACHINE: A27389 (30887)		EA	2										1A6H10
X2-F	5305	A148 SCREW MACHINE: SAME AS A147		EA	REF										1A6H11
M-D		A149 PLATE MOUNTING: A8697 (30887)		EA											1A6MP4
X2-F	5305	A150 SCREW MACHINE: SAME AS A140		EA	REF										1A6H12
X2-F	5305	A151 SCREW MACHINE: SAME AS A140		EA	REF										1A6H13
X2-F	5310	A152 WASHER FLAT: SAME AS A142		EA	REF										1A6H14
X2-F		A153 WASHER FLAT: SAME AS A142		EA	REF										1A6H15
X2-F	5310-045-3296	A154 WASHER LOCK: SAME AS A133		EA	REF										1A6H16
X2-F	5310-045-3296	A155 WASHER LOCK: SAME AS A133		EA	REF										1A6H17
M-D		A156 SCREEN PROTECTIVE: B27368 (30887)		EA	1										1A6MP5
X2-F	5305	A157 SCREW MACHINE: MS35559-26 (96906)		EA	2										1A6H18
X2-F	5305	A158 SCREW MACHINE: SAME AS A157		EA	REF										1A6H19
X2-F	5310	A159 WASHER LOCK: MS35335-30 (96906)		EA	2										1A6H20
X2-F	5310	A160 WASHER LOCK: SAME AS A159		EA	REF										1A6H21
M-D		A161 END BELL-INPUT: C27380 (30887)		EA	1										1A6MP6
M-D		A162 END BELL ASSEMBLY-OUTPUT: B27352 (30887)		EA	1										1A7MP1
P-F		A163 CAPACITOR FIXED MICA DIELECTRIC: A27395 (30887)		EA	1	*	*	*	*	*	*	5	4	5-1	1A7C1
X2-F	5995	A164 LEAD ELECTRICAL: A27396 (30887)		EA	1										1A7W1
X2-F	5995	A165 LEAD ELECTRICAL: A27398 (30887)		EA	1										1A7W2
X2-F	5305	A166 SCREW MACHINE: SAME AS A003		EA	2										1A7H1
X2-F	5305	A167 SCREW MACHINE: SAME AS A003		EA	REF										1A7H2

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR. CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP (CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
X2-F		A168 WASHER LOCK: SAME AS A159		EA	2										1A7H14
X2-F		A169 WASHER LOCK: SAME AS A159		EA	2										1A7H15
X2-F	5977	A170 HOLDER ELECTRICAL CONT BRUSH: A27373 (30887)		EA	1										1A7MP5
X2-F		A171 SET SCREW: SAME AS A174		EA	1										1A7MP6
X2-F	5977	A172 HOLDER ELECTRICAL CONT BRUSH: A27373 (30887)		EA	1										1A7MP8
X2-F		A173 SET SCREW: SAME AS A174		EA	1										1A7MP9
M-L		A174 SCREEN PROTECTIVE: A27370 (30887)		EA	2										1A7MP10
X2-F	5305	A175 SCREW MACHINE: SAME AS A157		EA	4										1A7MP11
X2-F	5305	A176 SCREW MACHINE: M335359-25 (96906)		EA	4										1A7MP12
X2-F	5310	A177 WASHER LOCK: SAME AS A159		EA	2										1A7MP13
X2-F	5310	A178 WASHER LOCK: SAME AS A159		EA	REF										1A7MP14
M-D		A179 SCREEN PROTECTIVE: SAME AS A174		EA	REF										1A7MP15
X2-F	5305	A180 SCREW MACHINE: SAME AS A157		EA	REF										1A7MP16
X2-F	5305	A181 SCREW MACHINE: SAME AS A176		EA	REF										1A7MP17
X2-F	5310	A182 WASHER LOCK: SAME AS A159		EA	REF										1A7MP18
X2-F	5310	A183 WASHER LOCK: SAME AS A159		EA	REF										1A7MP19
M-D		A184 SCREEN PROTECTIVE: B27369 (30887)		EA	1										1A7MP20
X2-F	5305	A185 SCREW MACHINE: SAME AS A157		EA	REF										1A7H15
X2-F	5305	A186 SCREW MACHINE: SAME AS A157		EA	REF										1A7H16
X2-F	5305	A187 SCREW MACHINE: SAME AS A176		EA	REF										1A7H17
X2-F	5305	A188 SCREW MACHINE: SAME AS A176		EA	REF										1A7H18
X2-F	5310	A189 WASHER LOCK: SAME AS A159		EA	REF										1A7H19
X2-F	5310	A190 WASHER LOCK: SAME AS A159		EA	REF										1A7H20
X2-F	5310	A191 WASHER LOCK: SAME AS A159		EA	REF										1A7H21
X2-F	5310	A192 WASHER LOCK: SAME AS A159		EA	REF										1A7H22
M-D		A193 END BELL-OUTPUT: B27669 (30887)		EA	1										1A7MP7
A-D-R		A194 ARMATURE ASSEMBLY: C26962 (30887)		EA	1										1A8E1
P-D	6125-408-2615	A195 ARMATURE: C26962-1 (30887)		EA	1							4	2	5-1	1A8E2
P-D	3110-156-3471	A196 BEARING BALL ANNULAR: 88502 (43334)		EA	1							4	2	5-1	1A8MP1
P-D	3110-156-3502	A197 BEARING BALL ANNULAR: 88503 (43334)		EA	1							4	2	5-1	1A8MP2
M-D		A198 BAFFLE FAN: B27363 (30887)		EA	1										1A8MP6
A-D-R		A199 HOUSING ASSEMBLY: C27387 (30887)		EA	1										1A9MP
X2-F	5995	A200 LEAD ELECTRICAL: A27400 (30887)		EA	1										1A9W1
X2-F	6125	A201 HOLDER FIELD A27379 (30887)		EA	2										1A9MP1
M-D		A202 INSULATION SHEET ELECTRICAL: A27378 (30887)		EA	4										1A9E2

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR. CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
M-D		A203 INSULATION SHEET ELECTRICAL: SAME AS A202	EA	REF										1A9E3
X2-F	6125	A204 HOLDER FIELD: SAME AS A3 A201	EA	REF										1A9MP2
M-D		A205 INSULATION SHEET ELECTRICAL: [illegible] AS A202	EA	REF										1A9E4
M-D		A206 INSULATION SHEET ELECTRICAL: [illegible] AS A202	EA	REF										1A9E5
X2-F	6125-[illegible]	A207 WINDING FIELD: M28001 (30687)	EA	1										1A9L1
X2-F	5340	A208 GROMMET RUBBER: 2533 (70485)	EA	2										1A9E6
X2-F	5340	A209 GROMMET RUBBER: SAME AS A208	EA	REF										1A9E7
M-D		A210 HOUSING: 526963 (30687)	EA	1										1A9MP3

SECTION VII.1 INDEX-FEDERAL STOCK NUMBER CROSS REFERENCE TO FIGURE AND ITEM NUMBER OR REFERENCE DESIGNATION

FEDERAL STOCK NUMBER	FIGURE NUMBER	ITEM NUMBER OR REF. DESIGNATION
3110-156-3471	5-1	1A8MP1
3110-156-3502	5-1	1A8MP2
5310-013-4530		1A4H1
5310-013-4530		1A4H8
5310-013-4530		1A4H11
5310-045-3296		1A5H4
5310-045-3296		1A6H8
5310-045-3296		1A6H9
5310-045-3296		1A6H16
5310-045-3296		1A6H17
5310-582-5965		1A5H19
5310-582-5965		1A5H20
5325-290-4344		1A4E6
5325-290-4344		1A4E7
5910-171-2952	5-1	1A4C2
5910-577-9125	5-1	1A6C1
5910-577-9293	5-1	1A4C1
5935-660-3825	5-1	1A3J1
5940-983-6043	5-1	1A4TB1
5950-656-2349	5-1	1A4L1
5950-656-2350	5-1	1A4L2
5970-496-8548		1A4E1
5970-496-8548		1A4E2
5970-496-8548		1A4E3
5970-496-8548		1A4E8
5970-496-8548		1A4E10
5975-190-1144		1A3MP1
5977-403-3908	5-1	1A3MP2
5977-403-0309	5-1	1A6MP3
5977-617-1259	5-1	1A5MP5
5977-617-1254	5-1	1A5E6
6105-235-4454		1A4L1
6125-408-2615	5-1	1A3EC
6125-617-1435	1-1	1A1MG

SECTION VII.2 INDEX-REFERENCE NUMBER CROSS REFERENCE

TO FIGURE NUMBER AND REFERENCE DESIGNATION OR ITEM NUMBER

REFERENCE NO.	MFGRS. CODE	FIG. NO.	REF. DESIGNATION OR ITEM NO.
A25099	76473		1A5MP4
A25099	76473		1A5MP5
A25551	30887		1A6H6
A25551	30887		1A6H7
A25551	30887		1A6H14
A25551	30887		1A6H15
A26965	30887		1A5H4
A27243	30887		1A5E4
A27243-1	30887		1A5E5
A27339	30887		1A5E6
A27339	30887		1A5E7
A27356	30887		1A7MP2
A27370	30887		1A7MP4
A27370	30887		1A7MP5
A27373	30887		1A7MP3
A27375	30887		1A5MP1
A27375	30887		1A5MP2
A27376	30887		1A5E1
A27376	30887		1A5E2
A27377	30887		1A5MP3
A27378	30887		1A9E2
A27378	30887		1A9E3
A27378	30887		1A9E4
A27378	30887		1A9E5
A27379	30887		1A9MP1
A27379	30887		1A9MP2
A27389	30887		1A6H10
A27389	30887		1A6H11
A27390	30887		1A6H4
A27390	30887		1A6H5
A27390	30887		1A6H12
A27390	30887		1A6H13
A27395	30887	5-1	1A7C1
A27396	30887		1A7W1
A27398	30887		1A7W2
A27400	30887		1A9W1
A27416	30887		1A3H2
A27424	30887		1A4W1
A27428	30887		1A4W2
A27438	30887	5-1	1A4C4
A27441	30887		1A4E4
A27441	30887		1A4E5
A27441	30887		1A4E9
A27441	30887		1A4E10
A27442	30887	5-1	1A4C3
A27443	30887		1A4H14
A27443	30887		1A4H21
A27443	30887		1A4H22
A27443	30887		1A4H33
A27443	30887		1A4H40
A27724	30887		1A4H15
A27724	30887		1A4H23
A27724	30887		1A4H24

REFERENCE NO.	MFGRS. CODE	FIG. NO.	REF. DESIGNATION OR ITEM NO.
A27724	30887		1A4H[illegible]
A27724	30887		1A4H[illegible]
A27724	30887		1A4H[illegible]
A27724	30887		1A4H[illegible]
A27724	30887		1A4H41
A27724	30887		1A4H[illegible]
A40941-1	30887		1A6W1
A5483	30887		1A4H17
A5483	30887		1A4H[illegible]
A5483	30887		1A4H[illegible]
A5483	30887		1A4H[illegible]
A5483	30887		1A4H[illegible]
A5483	30887		1A4H[illegible]
A5483	30887		1A4H[illegible]
A5746	30887		1A4H[illegible]
A5746	30887		1A4H27
A5746	30887		1A4H28
A5746	30887		1A4H[illegible]
A5746	30887		1A4H[illegible]
A5746	30887		1A4H[illegible]
A5746	30887		1A4H[illegible]
A5746	30887		1A4H43
A5746	30887		1A4H44
A6631	30887		1A4H[illegible]
A6631	30887		1A4H[illegible]
A6631	30887		1A4H[illegible]
A6631	30887		1A4H52
A8697	30887		1A6MP4
B26963	30887		1A[illegible]MP3
B27352	30887		1A7MP1
B27363	30887		1A[illegible]
B27368	30887		1A6MP5
B27369	30887		1A7MP6
B27420	30887		1A4MP1
B27669	30887		1A7MP7
B27999	30887		1A[illegible]FL
B28000	30887		1A[illegible]MT
C26962	30887		1A6E1
C27345	30887		1A3MP3
C27353	30887		1A6MP1
C27380	30887		1A6MP6
C27386	30887		1A5MG
C27387	30887		1A[illegible]MP
C27439	30887		1A4FL
MS35335-16	96906		1A6H3
MS35335-17	96906		1A1H4
MS35335-17	96906		1A5H5
MS35335-17	96906		1A5H6
MS35335-17	96906		1A5H7
MS35335-17	96906		1A5H8
MS35335-30	96906		1A6H20
MS35335-30	96906		1A6H21

TO FIGURE NUMBER AND REFERENCE DESIGNATION OR ITEM NUMBER

REFERENCE NO.	MFGRS. CODE	FIG. NO.	REF. DESIGNATION OR ITEM NO.
MS35335-30	96906		1A7H9
MS35335-30	96906		1A7H10
MS35335-30	96906		1A7H13
MS35335-30	96906		1A7H14
MS35335-30	96906		1A7H19
MS35335-30	96906		1A7H20
MS35335-30	96906		1A7H21
MS35335-30	96906		1A7H22
MS35338-23	96906		1A2H4
MS35338-23	96906		1A3H5
MS35338-23	96906		1A3H6
MS35338-23	96906		1A4H6
MS35338-23	96906		1A4H7
MS35338-23	96906		1A4H53
MS35338-23	96906		1A4H54
MS35338-23	96906		1A4H55
MS35338-23	96906		1A4H56
MS35338-23	96906		1A5H13
MS35338-23	96906		1A5H14
MS35338-23	96906		1A5H15
MS35338-23	96906		1A5H16
MS35338-23	96906		1A7H3
MS35338-23	96906		1A7H4
MS35357-28	96906		1A4H2
MS35357-28	96906		1A4H9
MS35357-28	96906		1A4H12
MS35357-41	96906		1A4H4
MS35357-41	96906		1A4H5
MS35357-77	96906		1A5H17
MS35357-77	96906		1A5H18
MS35358-22	96906		1A4H3
MS35358-22	96906		1A4H10
MS35358-22	96906		1A4H13
MS35359-25	96906		1A7H8
MS35359-25	96906		1A7H12
MS35359-25	96906		1A7H17
MS35359-25	96906		1A7H18
MS35359-26	96906		1A6H18
MS35359-26	96906		1A6H19
MS35359-26	96906		1A7H7
MS35359-26	96906		1A7H11
MS35359-26	96906		1A7H15
MS35359-26	96906		1A7H16
MS35359-43	96906		1A1H4
MS35359-43	96906		1A2H4
MS35359-43	96906		1A3H3
MS35359-43	96906		1A3H4
MS35359-43	96906		1A5H1
MS35359-43	96906		1A5H2
MS35359-43	96906		1A5H3
MS35359-43	96906		1A5H4
MS35359-43	96906		1A5H9
MS35359-43	96906		1A5H10
MS35359-43	96906		1A5H11
MS35359-43	96906		1A5H12
MS35359-43	96906		1A7H1
MS35359-43	96906		1A7H2
MS35359-46	96906		1A4H45
MS35359-46	96906		1A4H46
MS35359-46	96906		1A4H47
MS35359-46	96906		1A4H48
MS35359-64	96906		1A6H2
MS35649-82	96906		1A3H1
MS35649-82	96906		1A3H2
MS35650-102	96906		1A5H4
MS35650-102	96906		1A6H1
MS51017-34	96906		1A7H5
MS51017-34	96906		1A7H6
2533	70485		1A9B6
2533	70485		1A9E7

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1A1H4	C-5
1A1MG	C-4,C-5
1A2FL	C-5
1A2H4	C-5
1A3H1	C-5
1A3H2	C-5
1A3H3	C-5
1A3H4	C-5
1A3H5	C-5
1A3H6	C-5
1A3J1	C-5
1A3MP	C-5
1A3MP1	C-5
1A3MP3	C-5
1A4C1	C-5
1A4C2	C 5
1A4C3	C-5
1A4C4	C-5
1A4E1	C-6
1A4E2	C-6
1A4E3	C-6
1A4E4	C-6
1A4E5	C-6
1A4E6	C-6
1A4E7	C-6
1A4E8	C-6
1A4E9	C-6
1A4E10	C-7
1A4FL	C-5
1A4H1	C-5
1A4H2	C-5
1A4H3	C-5
1A4H4	C-5
1A4H5	C-5
1A4H6	C-5
1A4H7	C-5
1A4H8	C-5
1A4H9	C-5
1A4H10	C-5
1A4H11	C-6
1A4H12	C-6
1A4H13	C-6
1A4H14	C-6
1A4H15	C-6
1A4H16	C-6
1A4H17	C-6
1A4H18	C-6
1A4H19	C-6
1A4H20	C-6
1A4H21	C-6
1A4H22	C-6
1A4H23	C-6
1A4H24	C-6
1A4H25	C-6
1A4H26	C-6
1A4H27	C-6
1A4H28	C-6
1A4H29	C-6
1A4H30	C-6
1A4H31	C-7
1A4H32	C-7
1A4H33	C-7
1A4H34	C-7
1A4H35	C-7
1A4H36	C-7
1A4H37	C-7
1A4H38	C-7
1A4H39	C-7
1A4H40	C-7
1A4H41	C-7
1A4H42	C-7
1A4H43	C-7
1A4H44	C-7
1A4H45	C-7
1A4H46	C-7
1A4H47	C-7
1A4H48	C-7
1A4H49	C-7
1A4H50	C-7
1A4H51	C-7
1A4H52	C-7
1A4H53	C-7
1A4H54	C-7
1A4H55	C-7
1A4H56	C-7
1A4L1	C-6
1A4L2	C-6
1A4MP1	C-7
1A4TB1	C-7
1A4W1	C-7
1A4W2	C-7
1A5E1	C-7
1A5E2	C-7
1A5E3	C-4,C-8
1A5E4	C-8
1A5E5	C-8
1A5E6	C-4,C-8
1A5E7	C-8
1A5H1	C-8
1A5H2	C-8
1A5H3	C-8
1A5H4	C-8
1A5H5	C-8
1A5H6	[illegible]
1A5H7	[illegible]
1A5H8	[illegible]
1A5H9	
1A5H10	
1A5H11	
1A5H12	
1A5H13	
1A5H14	
1A5H15	
1A5H16	
1A5H17	
1A5H18	
1A5H19	
1A5H20	
1A5MG	
1A5MP1	
1A5MP2	
1A5MP3	
1A5MP4	
1A5MP5	
1A6C1	
1A6H1	
1A6H2	
1A6H3	
1A6H4	
1A6H5	
1A6H6	
1A6H7	
1A6H8	
1A6H9	
1A6H10	
1A6H11	
1A6H12	
1A6H13	
1A6H14	
1A6H15	
1A6H16	
1A6H17	
1A6H18	
1A6H19	
1A6H20	
1A6H21	
1A6MP1	
1A6MP2	
1A6MP3	
1A6MP4	
1A6MP5	
1A6MP6	
1A6W1	
1A7C1	

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CROSS REFERENCE TO PAGE NUMBER

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1A7H1	C-9				
1A7H2	C-9				
1A7H3	C-10				
1A7H4	C-10				
1A7H5	C-10				
1A7H6	C-10				
1A7H7	C-10				
1A7H8	C-10				
1A7H9	C-10				
1A7H10	C-10				
1A7H11	C-10				
1A7H12	C-10				
1A7H13	C-10				
1A7H14	C-10				
1A7H15	C-10				
1A7H16	C-10				
1A7H17	C-10				
1A7H18	C-10				
1A7H19	C-10				
1A7H20	C-10				
1A7H21	C-10				
1A7H22	C-10				
1A7MP1	C-9				
1A7MP2	C-10				
1A7MP3	C-10				
1A7MP4	C-10				
1A7MP5	C-10				
1A7MP6	C-10				
1A7MP7	C-10				
1A7W1	C-9				
1A7W2	C-9				
1A8E1	C-10				
1A8E2	C-10				
1A8MP1	C-10				
1A8MP2	C-10				
1A8MP6	C-10				
1A9E2	C-10				
1A9E3	C-11				
1A9E4	C-11				
1A9E5	C-11				
1A9E6	C-11				
1A9E7	C-11				
1A9L1	C-11				
1A9MP	C-10				
1A9MP1	C-10				
1A9MP2	C-11				
1A9MP3	C-11				
1A9W1	C-10				

By Order of the Secretary of the Army:

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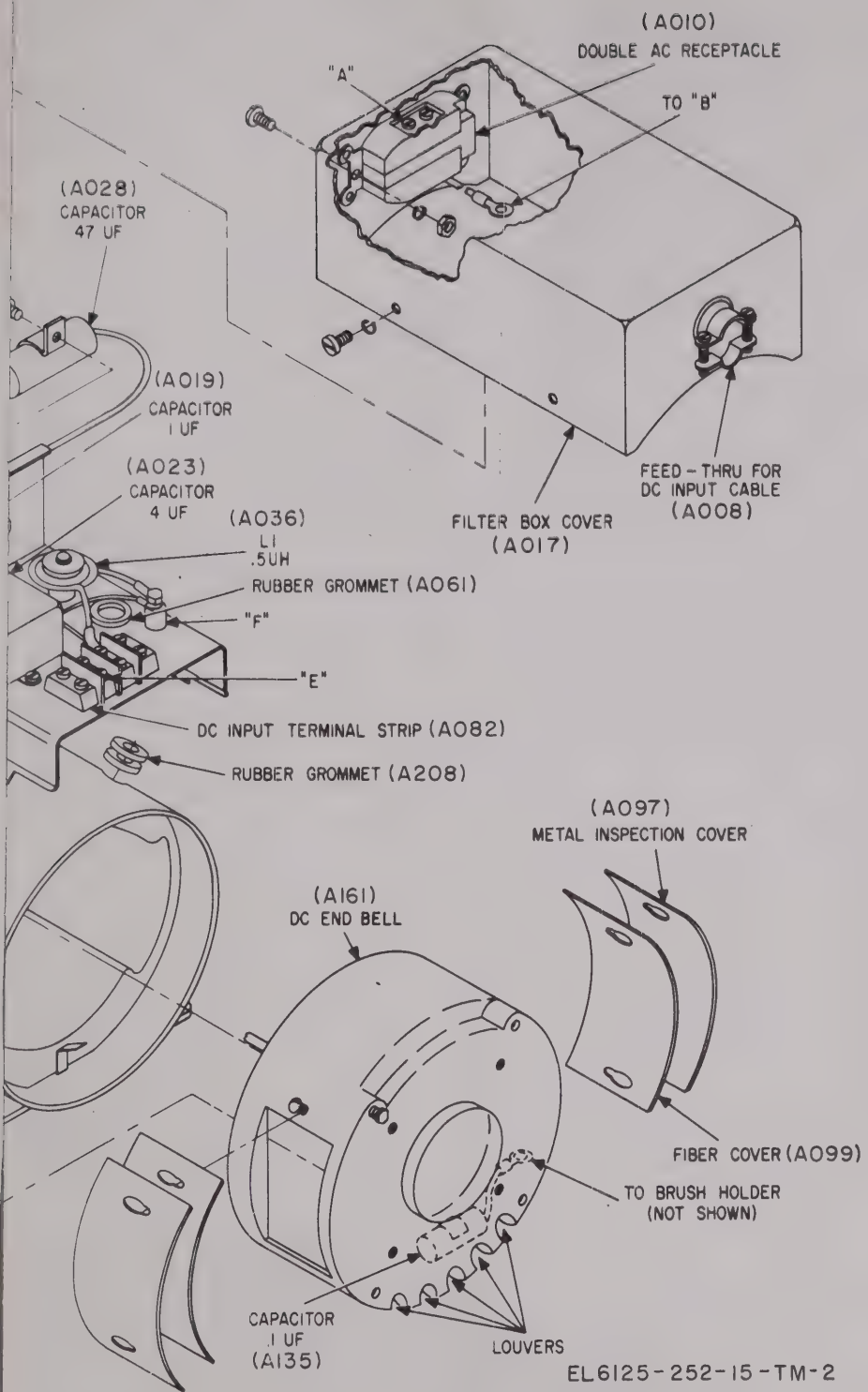

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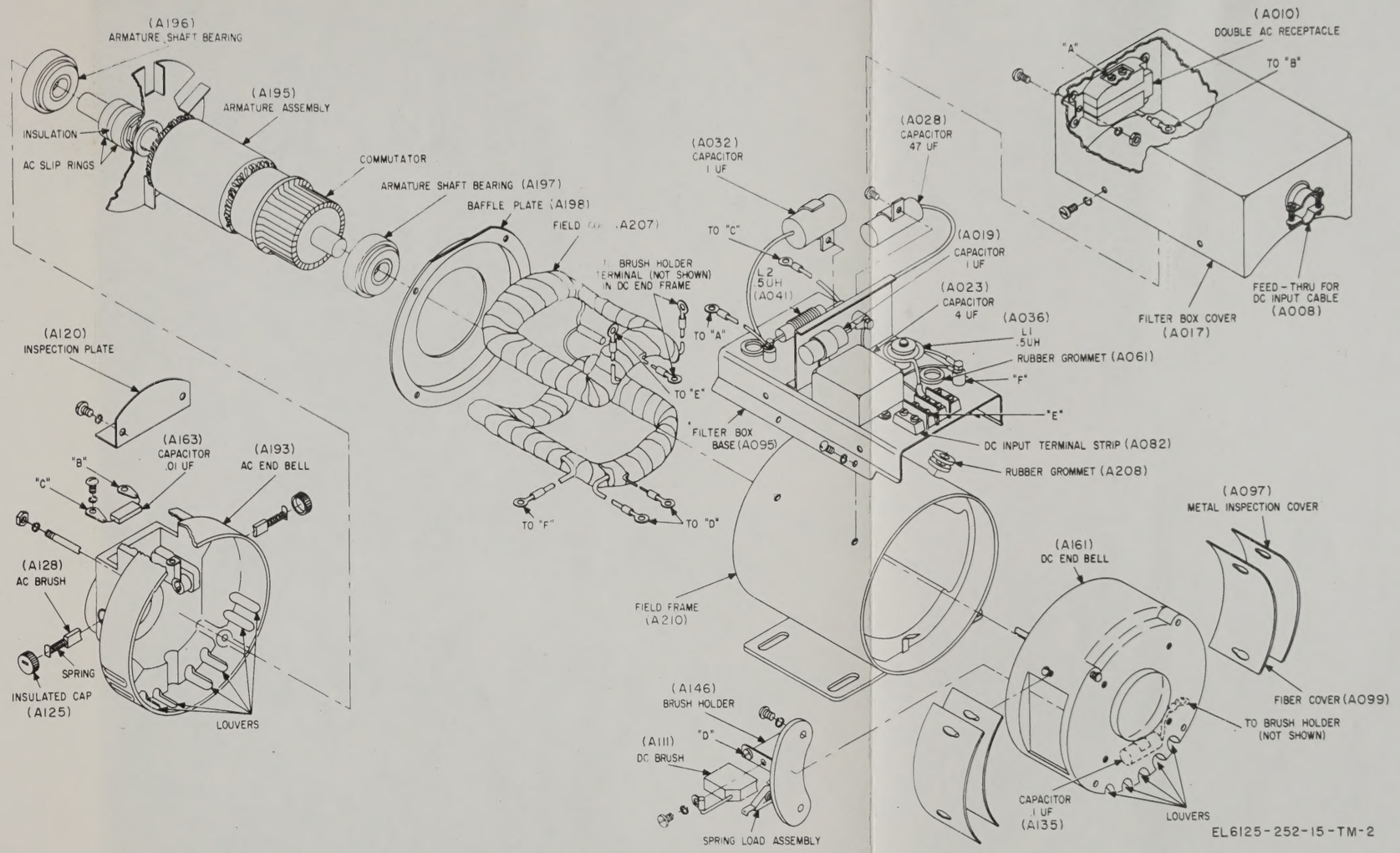

Figure 5-1. Motor generator, exploded view.